

Growth Performance of New Born Holstein Calves Supplemented with Garlic (*Allium sativum*) Powder and Probiotics

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Abstract : Secondary metabolites (thiosulphinates) from *Allium sativum* are able to stimulate the production of volatile fatty acids. This study was carried out to investigate the effects of feeding Garlic powder or probiotics or a combination of both on feed intake and growth performance of Holstein calves. Neonatal calves were randomly allocated, according to birth weight, to four dietary treatments, each with 8 calves. The treatments were: C control, no additive (C), G: supplemented with either 5g/d garlic powder (G) or 4 g/d probiotics (P) or GP 5g/d garlic powder and 4 g/d probiotics compound (GP) with the total viable count of 1.3×10^7 cfu/g. Garlic and probiotics were diluted in the daily milk allocation from day 4. Commercial (17.5% CP) starter feed and fresh water were available ad libitum from day 4 until day 42 of age. Calves fed GP (0.27 kg day⁻¹) tended (P=0.055) to have higher DMI than C (0.22 kg day⁻¹). Milk, water, CP, fat intake and FCR were not affected (P>0.05) by the treatments. Metabolisable energy (ME) intake for GP group tended (P=0.058) to be higher than C calves. Combination of G and P (60.3 kg) tended (P = 0.056) to be higher than C (56.0 kg) calves on final BW. Garlic, probiotics or their combination did not affect calves' HG, ADG and BL (P>0.05). The results of the current study indicated that combination of garlic and probiotics may improve nutrients intake and body weight when fed to calves during the first 42 days of life.

Keywords : garlic powder, probiotics, intake, growth, Holstein calves

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