Liwen He et al., J Adv Dairy Res 2016, 4:2(Suppl)
http://dx.doi.org/10.4172/2329-888X.C1.002

Effects of sulfur on the nutrition value of DDGS for beef cattle

Liwen He, Qingxiang Meng, Hao Wu, Wanbao Chen and **Liping Ren**
China Agricultural University, China

To investigate the effects of sulfur on the nutrition value of DDGS for beef cattle, in vitro cultivation was conducted for 72 h with the rumen fluid collected from steers, setting different sulfur levels (0.346%, 0.692% and 1.038%) and various sulfur sources (Na2SO4, Na2SO3, Na2S2O3 and Na2S), monitoring the fermentation parameters (dry matter digestibility, gas production and its rate) and model predicted indicators (organic matter digestibility, metabolizable energy, net energy, microbial protein, partitioning factor and gas yield). The results showed that, high sulfur level (0.692% and 1.038%) only decreased (P<0.05) asymptotic gas production (b), while different sulfur sources resulted in various parameters, more specifically, sulfur from Na2SO4 and Na2S produced more gas (P<0.05) with faster rate (P<0.01) of gas production than those of Na2SO3 and Na2S2O3, while Na2SO3 had the highest b and inverse for Na2SO4 (P<0.01), which tended (P=0.09) to produced lower total volatile fatty acids than the others; sulfur from Na2SO4 and Na2S also had a lower (P<0.01) DMD in 24 h, MCP, PF24 and a higher (P<0.01) OMD, ME, NEm, NEg, GY24 than those of Na2SO3 and Na2S2O3. These results suggest that DDGS with different sulfur content ranging from 0.346% to 1.038% have a similar feed value and dietary sulfur source exerts a great effect on its nutrition value for beef cattle.

Biography

Liwen He is a PhD candidate of China Agricultural University, majoring in Animal Nutrition and Feed Science and specifying in Ruminant Nutrition. He has published four SCI papers and research subject is about efficient use of crop straw in livestock.

helw082@163.com

Notes: