Evaluation of the health care effect of ketosis in intensive cattle farms and the new measures of propylene glycol in the prevention and treatment of ketosis

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Abstract

Statement of the Problem: Perinatal period is the key period for dairy farming. Ketosis caused by energy deficiency is easy to cause deficiency of immune system function, which increases the incidence of other postpartum diseases and brings adverse effects on the performance, health, and economic benefits of cows. Researchers have reported that ruminants cannot directly utilize monosaccharides, but mainly generate a series of volatile fatty acids through the decomposition of carbohydrates. Propylene glycol is a health care preparation for perinatal ketone disease, but its application lacks standards. The purpose of this study was to comprehensively evaluate the effect of perinatal propylene glycol on the prevention and treatment of ketosis and to provide a new plan for the prevention and treatment of ketosis in dairy cows. Methodology & Theoretical Orientation: The perinatal health care measures and effects of ketosis in several intensive cattle farms were investigated and the health care measures were improved according to the results. Comprehensively evaluate the effect of the new measures of propylene glycol on the prevention and treatment of ketosis, and provide a more standard and effective perinatal ketosis health care program for intensive cattle farms. Findings: Health measures and effects of propylene glycol on intensive cattle farms were not consistent. The newly improved health regimen (supplemented with 500 mL propylene glycol on day 7 and 14 postpartum) significantly reduced the risk of ketosis in cows by 2.5 times and increased net profit per cow. Conclusion & Significance: Intensive dairy farms can promote a new ketosis health care program to prevent the occurrence of ketosis and improve the economic benefits of dairy farms. It provides technical support for ensuring the health of dairy cows and improving economic benefits.

Economic benefits of dairy cows/￥

Group	Control		Traditional method		New measures	
	Sick cows	Health	Sick cows	Health	Sick cows	Health
Benefit	13,917.74	68,625.44	11,848.88	71,536.28	6,269.25	79,386.75
Total	82.543.17		83,235.17		85,506.00	
Average benefit	2751.44		2774.51		2850.20	
Net profit	0		23.07		98.76	

Biography

Zhijie Wang had majored in animal medicine and graduated from Heilongjiang Bayi Agricultural University, China. He is currently studying for a master's degree in clinical veterinary medicine. He has professional knowledge and enthusiasm in researching dairy cattle nutritional and metabolic diseases and animal internal medicine.

Publications

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