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反刍动物氨基酸营养平衡理论及其应用

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Recent Advances in Amino Acid Nutritional Balance Theory for Ruminants and Its Application

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摘要 当前,动物生产者面临着提高畜产品中氨基酸含量和改善畜产品品质以及降低动物粪尿中氮氮排放量的双重任务。依照反刍动物蛋白质营养特点,通过对可吸收氨基酸平衡的调控来降低饲料中蛋白质饲料用量,最大限度地提高动物对饲料蛋白质的利用效率,减少随粪、尿排出的含氮物质数量是一条节约蛋白质饲料的重要途径。本文就反刍动物的氨基酸营养平衡理论及其应用方面的研究进展进行了综述,并对反刍动物体内不同组织层次包括消化道、肝脏和肝外组织的氨基酸平衡调控的研究方法和评价指标进行了评述。

关键词: 反刍动物 氨基酸 营养平衡理论 应用

Abstract: Currently, animal producers are often facing some dual purpose tasks to increase amino acid content and to improve quality of animal products, as well as to decrease nitrogen output of excrement of farm animals. According to the protein nutritional characteristic of ruminants, the modulation of absorbable amino acid balance is an important way to save protein feeds by decreasing the amount of dietary protein feeds, improving their availability and reducing the quantity of nitrogen-containing material as feces and urine. In this paper, recent advances in amino acid balance theory and its application in ruminants were reviewed, and the study methods and evaluating indexes of amino acid balance in different tissues including the small intestine, liver, portal system as well as peripheral tissues for ruminant were also reviewed.

Keywords: ruminants, amino acid, nutritional balance theory, applied techniques

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