

The Use of Hydrolyzed Proteins (Peptide) in Young Ruminant Nutrition

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A major goal for young ruminant is to enhance the efficiency of feed utilization. Recent years have witnessed growing interest in the role of hydrolyzed proteins in young ruminant nutrition. The type of protein source and its quality play an important role in diet of young ruminants. The hydrolyzed proteins (peptides) as the products obtained by enzymatic hydrolysis of protein, acids and or fermentative processes. In the small intestine, large peptides are hydrolyzed to small peptides, which are absorbed into enterocytes faster than free amino acids (AAs) to provide a more balanced pattern of AAs in the blood circulation of animal. According to the results of the tables of this study, improvements in feed intake and daily weight gain of experimental lambs indicate positive effects of peptide supplement on feeding in suckling lambs leading to significant enhancements in growth performance traits. The activity of the protease enzymes in the small intestine of the young ruminants is less. Therefore, the peptide supplement can play an important role in improving the growth performance of infant ruminants and piglets in comparison with intact dietary protein sources.

The Plant protein hydrolysates provide highly digestible peptides, as well as specific AAs to confer nutritional and physiological or regulatory functions in animals. These peptides exert beneficial effects on improving intestinal morphology, performance, and resistance to infectious diseases in young ruminant. The peptides obtained from proteolytic hydrolysis of different plant proteins have been shown to have various biological activities including enhancing growth performance and immunological status, offering a more cost-effective way of supplementing AA. protein hydrolysates (peptide) contains a variety of important nutrients including calcium and vitamins produced during the fermentation process, which should provide functional properties, such as growth promoting effect, and enhancing effect in feed efficiency. Proteins play a critical role in the growth and development of young animals. It is in these early stages of life, providing easily digestible sources of protein can set the stage for improving long-term growth performance. The use of protein hydrolysates as an important nutrient for growth and maintenance has been increasing in young ruminant nutrition.

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