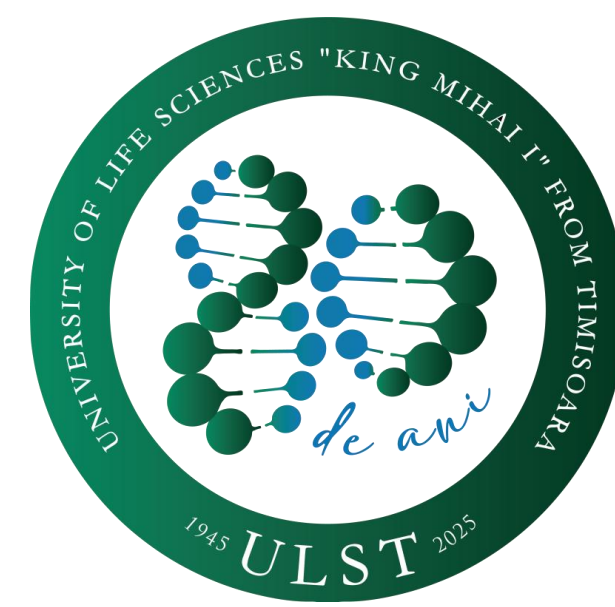




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## Use of proteolytic enzymes in cattle nutrition - A Review

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**Abstract:** *The use of proteolytic enzymes in cattle feeding represents a promising direction for enhancing feed digestibility and potentially the Feed Conversion Ratio (FCR). Optimizing amino acid assimilation with the help of proteases contributes to increased feed efficiency, higher average daily weight gains, and improved overall animal health. This article analyzes scientific studies aimed at investigating the effects of various protease dosages in cattle diets and also notes the effects of combining proteolytic enzymes with other feed additives, mainly exogenous enzymes.*

### • Introduction

One of the ways which people can use to increase the individual productivity of an animal is the usage of feed additives. One of the more promising feed additives are the exogenous enzymes. Particularly interesting are the proteolytic enzymes which are known for increasing digestion and absorption of protein and its subsequent utilization.

The goal of this review is to systematize and analyze current research on the addition of a proteolytic enzyme to the diet of dairy and beef cattle, as well as to evaluate the effectiveness of using a proteolytic supplements in feeding.

### • Material and method

The reviewed experiments were conducted on cows of different breeds, ages and specializations. Most of them were carried out on beef steers to see if there were any changes in the feed intake, digestion and final body weight.

But there were also many researches regarding dairy cattle particularly the Holstein breed, and the effects proteases had on their nutrition, milk yields and milk content

### • Conclusions

The paper was meant to review the use of exogenous proteolytic enzymes on dairy and beef cattle of different ages.

It was concluded that proteases in feeding dairy cows has a positive impact on the overall digestibility of nutrients and DMI, although there were no significant changes in the milk composition or yields.

Combining EPE with other exogenous enzymes also showed that they can complement each other.

Feeding beef cattle with proteases proved more effective than with dairy cows, because there was more impact on the body weight of the steers. Also proteases increased the feed conversion and effectiveness in elderly cattles.