

# *The Influence of Ammoniated Straw on Lamb Fattening Effect*

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**Keywords:** Ammoniated rice straw; feeding; fattening; influence

**Abstract:** In terms of food intake of mutton sheep, mutton grass has fast decomposition speed and high rumen pass rate, which cannot give full play to its advantages in a long time. High NDF prepared by high NDF and rapid ammonia treatment equipment began to show benefits. When the addition rate of ammonia straw exceeds 50%, it can be determined that the addition rate of ammonia straw is 75%. In this round of attempt, the 76% ammonification straw team had little food cost, but profit, the sheepgrass team invested capital and profit a lot, the 26% ammonification straw group had the highest feed cost sheepgrass group ranked second. This indicates the goals that can be achieved. It is possible to replace the sheep herb with a small amount of amidated straw. Research shows the transformation of DM and NDF, and the parabola is suitable for the data presented by experts. Between 2 days and 3 days, the degradation rate leveled off, and the loss rate of degradation in the rumen. This group increased rapidly within 0 to 6 hours, stabilized within 6 to 12 hours, and the DM loss rate increased rapidly within 12 to 72 hours. Consistent with the nutritional value and disappearance rate of NDF, ADF and other nutrients, CP in dry matter began to degrade rapidly within 0~6 hours, ADF in dry matter and half a day, the degradation rate leveled off, the loss rate of dry matter in rumen the group increased rapidly within 0~6 hours, stable within 6~12 hours, and the DM loss rate increased rapidly within 12~72 hours.

## **1. Introduction**

Using boiled ammonification to solve the modulation of ammonification straw, and understand the difference between livestock and ammonification straw compared with the number of feeding and the daily weight change of mutton sheep. DM, NDF, CP digestion showed an orderly change in the rumen of sheep, with the increase of the number of ammonification straw. Except, the conversion amount of DM, NDF and CP in 76% ammonification straw pair was the highest in the rumen. The study said that the amount of straw conversion has increased significantly.<sup>[1]</sup>

## **2. Effect of rice straw treatment with different proportions of ammonia on the fattening effect of lambs**

Food intake is a main factor determining feed quality and livestock performance. Many scholars

believe that feed intake is the main limiting factor of ruminant productivity, which is generally understood as edible quantity is the energy demand of livestock that arrange calories and other feed supplies.<sup>[2]</sup>

Quantitative changes in rumen volume and transformation of digesta in the stomach. Depending on the key point of the digestion volume.<sup>[3]</sup> The conclusion of this study shows that the proportion of ammonification straw increased, and the food intake showed a decreasing trend. The alkali grass and 26% ammonia straw were lower than the other two groups, and the feeding amount of alkali straw and 26% ammonia straw was significantly different. Because the specific proportion of NDF is low, the conversion volume is high in the rumen, the rumen is quickly emptied.<sup>[4]</sup> After ammonification, the color of straw becomes dark gold, with color and softening; the feeding amount of ammonification straw is increased, NDF is increased by more than 11%, but the proportion of NDF is higher than alkali grass, the feeding amount decreases, and the residence time is prolonged in the rumen.

The daily gain of alkali straw and 26% ammonia straw group is higher than that of 55% ammonia straw and 76% ammonia treated straw group, but the difference between the two is significant, which is not the case.<sup>[5]</sup> There is no need to arrange the weight difference between teams 1,1,2 and 3 and 4. It shows that the difference of feeding makes the daily weight change different, the increase of feeding, the higher the weight. This indicates that the weight without affecting the feed volume increased. Lamb fattening effect: the optimal replacement rate of ammonia-treated straw group was 25%. (The difference in food intake and daily weight gain between 25% ammonia and grass grass group was not significant ( $P > 0.05$ )), and the difference in daily weight gain between the groups was not significant ( $P > 0.05$ ). In terms of feed intake, sheepgrass has fast decomposition speed and high rumen pass rate, which fails to play its advantages in a long time. High NDF and high NDF prepared by rapid ammonia treatment equipment began to show benefits. The rate of CP deterioration.<sup>[6]</sup> When the addition rate of ammonia straw exceeds 50%, it is reasonable to determine that the addition rate of ammonia straw is 75%. In this experiment, the feed cost of 75% ammonia straw group was the lowest, but the profit was also the lowest, the input cost and profit of the straw group were the highest, and the group with the highest feed cost of 25% ammonia straw group ranked the second. This indicates the goals that can be achieved. It is possible to replace the sheep herb with a small amount of amidated straw.<sup>[7]</sup>

### 3. Effect of rumen fermentation at different ammonia treatment times

The pH of the ruminal fluid indicates the level of its digestion. The range of acid and base value of ruminal fluid depends on the type of feed, feeding method and how long when feeding. In general, the acidity of the rumen will change with the long time of food intake. The data show that the ruminal pH should be between 5.6 and 7.3. Compared to  $< 5.6$  or  $7.3$ . If  $> 5.6$  or  $7.3$ , it can affect the normal digestion of the rumen microorganisms, and NDF and ADF fermentation in the rumen is caused by fiber-degrading bacteria. Fiber-degrading bacteria respond to pH. When the motility of fiber-degrading bacteria is decreased. The pH level reached 6.2. In this study, four feeding methods were used: the rumen pH of 5.9-6.1 after feeding, which did not affect the activity of microorganisms, which survive in a comfortable environment. The rumen pH of mutton sheep does not increase. The pH decreased after 180 minutes, then increased later, and the same change after 180 minutes, and then fed.<sup>[8]</sup>

NH<sub>3</sub>-N in the rumen is the result of transformation in herbivorous feed, which depends on the feed route, food and green feed coarse feed content. It's not the same. NH<sub>3</sub>-N concentration is the standard for nitrogen source digestion in the rumen and is also a nitrogen source for microbial survival. The content of NH<sub>3</sub>-N directly affects the secretion of the rumen fluid. The better NH<sub>3</sub>-N

content was 8 – 10mg / 100ml. However, the NH<sub>3</sub>-N concentration between 6.3 and 27.5mg / 100ml is within the specified situation. The movement of microorganisms means that if the NH<sub>3</sub>-N content is too much, the nitrogen source of the NH<sub>3</sub>-N in the feed is wasted, so the NH<sub>3</sub>-N concentration in the feed should be adjusted.<sup>[9]</sup> This study shows that each feed ratio changes the NH<sub>3</sub>-N concentration of mutton sheep, and the NH<sub>3</sub>-N concentration is the highest after 180 minutes of feeding. The same change in nitrogen concentration occurs when the rumen wall reaches the next feeding, consistent with Reddy's experiment. The volatile fat of sheep is the main component of herbivores, accounting for about 65%~79% of physical energy. It is mainly converted into various acetic acid, propionic acid, butyric acid.<sup>[10]</sup>

At present, the specific gravity of VFA is the focus of the energy conversion rate, and it is converted into propionic acid fermentation, which is acetic acid fermentation. Since the ratio of acetic acid to propionate obtained in this experiment was less than 3, the digestion of ruminal acetic acid under different feed was beneficial to the growth of mutton sheep. In this experiment, the acetic acid concentration was the lowest, which was estimated to be lower. The rumen environment is not important. The absorptive rumen of VFA in ruminant animals is always unchanged, while the molar concentration of acetic acid is always the biggest culprit.<sup>[11]</sup>

In this study, the acid content of feeding a different feed in the rumen of mutton sheep was unchanged, indicating the highest concentration of acid. After 180 minutes of feeding, the content slowly decreases, indicating that the rumen digestion transforms into a lot of VFA after feeding. As time passes, the digestion and conversion energy of the rumen in VFA increases; eventually, the weight becomes less. Digestive-transformed VFA is mostly absorbed, and very few parts of the gastrointestinal tract undergo reabsorption.<sup>[12]</sup>

#### **4. The rate of decomposition of ammonification straw in the rumen due to different ammonia treatment time**

Research shows the transformation of DM and NDF, and the parabola is suitable for the data presented by experts. Between 2 days and 3 days, the degradation rate leveled off, and the loss rate of degradation in the rumen. This group increased rapidly within 0 to 6 hours, stabilized within 6 to 12 hours, and the DM loss rate increased rapidly within 12 to 72 hours. Consistent with the nutritional value and disappearance rate of NDF, ADF and other nutrients, CP in dry matter began to degrade rapidly within 0~6 hours, ADF in dry matter and half a day, the degradation rate leveled off, the loss rate of dry matter in rumen the group increased rapidly within 0~6 hours, stable within 6~12 hours, and the DM loss rate increased rapidly within 12~72 hours. With NDF, ADF nutrients nutritional value and disappearance rate of CP in 0~6 hours, ADF and half a day, in the cooking time for 180 minutes, 0 to 6 hours effect, the basic principle is that ammonia in continuous high temperature is the destruction of lignin chemical bonds make their chemical bonding into a large number of cellulose and bacteria protein finally increase with time for a long time, the optimal time is 180 minutes.

#### **5. Conclusion**

As ruminants have the function of secondary absorption of cellulose, the ammoniated straw can be effectively utilised. As a result of this study, straw has been converted into green fodder, saving food, reducing the cost of raising livestock and greatly increasing the income of farmers. In this study, various factors in the commissioning of straw ammoniation were fully considered and the best method for commissioning of straw ammoniation was summarised.

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