

Use of Rubber Seed Meal, Palm Oil Meal and Urea-treated Straw
in Ruminant Rations

by

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SUMMARY

Rice straw is a low quality roughage. It contains approximately 3-4% crude protein, 33% crude fiber and has 43-48% dry matter digestibility. The straw has been used for livestock feeding for centuries especially during the dry or wet season. If the ruminants receive only rice straw, they will lose their body weight. At present, there is a method to improve straw quality by treating the straw with 6% urea solution for 3 weeks using the water : straw ratio of 1:1. The experiment was conducted to determine possible levels of water for urea treatment of straw. It appeared that 20-100% of water was possible. The urea-treated straw (20% water) showed the highest levels of crude protein and digestibility, 10.81% and 61.04%, respectively. The treated straw (60% water) contained 6.25% protein and 59.49% digestibility whereas that containing 100% water had only 4.50% protein and 56.04% digestibility. It is evident that 60-80% of water can be used to treat the straw if it is firmly sealed.

Urea-treated straw (6% urea, 100% water, ensiled for 3 weeks) was given to the cattle with or without concentrate supplement. It appeared that the cattle receiving urea-treated alone could maintain or even increase their body weight (10 g/d) whereas those receiving urea-treated straw plus concentrates (0-35% rubber seed meal) could gain from 269-324 g/d. The diet containing 25% rubber seed meal gave the best results in terms of weight gain and feed efficiency. It is evident that as much as

35% rubber seed meal can be included in the rations of cattle which receive urea-treated straw as a basal feed. In addition, 40% oil palm meal could be added in cattle rations. It appeared that the cattle receiving untreated rice straw plus 40% oil palm meal diet could gain 308 g/d whereas those receiving urea-treated straw and 40% oil palm meal diet gained 554 g/d. The oil palm meal can not only reduce feed cost but also show a good trend of feed efficiency.