The purpose of this research was to improve nutritive values and digestibility of rice straw for ruminant and to improve its availability especially in the dry season by breaking the bonds of lignocellulose to increase the Access of rumen microbes in digesting cellulose as energy source. Used was the isolation of lactic acid bacterial (*Lactobacillus sp*) and cellulolytic bacterial (*Ruminococcus albus*) from the ruminal liquid of goat and lignolytic microbes (*white rot fungi*) was obtained from palm oil waste and proliferated at compos media. It was to test the inoculum of microbes degrading the fibre fraction of rice straw. Lactic acid, cellulolytic, and lignolytic microbes were used to ferment alkali treated rice straw added with urea and tapioca flour. The experiment was carried out to completely randomised design. Other nutrients were analyzed using proximate analysis. It is concluded from this experiment that treatment combination of fermented rice straw 70% and *Gliricidia maculata* 30% had significant effect (p<0.05) on crude protein, crude fiber, NFE, ash and Ca contents of feeding. That treatment combination of alkali, ammonia (urea 4%), lactic acid and cellulolytic bacteria 5%, white rot fungi whit the addition of tapioca flour 5% can increase nutrition value of rice straw.

**Keywords:** *Gliricidia maculata, rice straw, cellulolytic, lignolytic and lactic acid microbes.*