Utilization Fungus Treated Wheat Straw In Pregnant And Lactating Cow

Introduction

Optimum weight gain and milk production and normal parturition required a balanced diet with adequate nutrients. Mainly concentrates are using to enhance milk production and to achieve optimum weight gain but it gives negative impact on animal health such as reduce (DMI dry matter intake), development of acidosis and lessen the milk fat content. NDF is necessary to maintain the normal pH of the rumen. Thus, a balanced diet must contain high quality forages. But forages are not available all over the world in excessive amount so lignified crop residues such as straw can be used. Straw is mainly using to fill the rumen that reduces many Gastrointestinal tract disorder i.e. abomasum displacement but without chemical and biological treatment its efficacy is low that can be enhance by treating it with hydrogen peroxide, sodium hydroxide, urea etc. and it biologically treated with fungus white rot fungi. It may result in increased milk yield, increased milk fat content as well enhanced body weight gain.

Objective

The objective of this study is to investigate fungal treated wheat straw how it effects the reproductive health of cattle, Milk yield/composition and metabolic disorders.

- How it will affect the palatability of feed?
- What is its effect on conception?
- What is its effect on pregnancy?
- How it will affect parturition?
- What is its impact on parity no of cattle?
- What are its effects on milk yield/composition with respect to parity no?
- What are the Metabolic disorders/diseases that are encounter during feeding with treated wheat straw?

Material and method

· Wheat straw treatment

I will saturate the wheat straw in water for 24 hours, pack in steel barrel for pasteurization by boiling at high temperature for one hour. The wheat grain spawn of Pleurotus ostreatus used to inoculate the wheat straw and pasteurized straw mix with spawn (4kg spawn/100 kg wheat straw). Inoculated wheat straw packed in polypropylene or polythene bags and tighten up with nylon cord and transferred into fermentation room having temperature of 25±3°C and relative humidity at 80±5% maintained by sprinkling of water. Fermentation process may last for seven weeks during which mushroom can be harvested twice. After completion of 7 weeks all the bags remove form the fermentation site and open in an area where all the biomass exposes to sunlight for drying. After one week of drying with sunlight chopped into 3-6 cm length by using electric chopper machine.

· Experimental trial Pan

12 cows will be allocated for this trial divided into 2 groups. One is control group (feeding with wheat straw without treatment) and other is experimental group (feeding with treated wheat straw). Experiment group will further divide into 3 group. 1st Ex. Group (2 cows having parturition history within 45 days and again inseminated) 2nd group (2 cows having pregnancy of 2-5 months) 3rd group (2 cows having 240±10 days pregnant) and 4th group (2 cows that are nearly parturiated i.e. within 45 days). This trial will last for 3-5 months.

· Feed Intake/ Milking record/Reproductive status/Statistical Analysis

Feed intake will be record daily to check the palatability of treated wheat straw. Milking will be twice a day by milking machine and its composition will be check by lactoscan two times within in week. Reproductive status will be examining twice a week by performing ultrasonography. All the observations are recorded and analyzed by performing Duncan Test/Paired sample T and Z test and one-way ANOVA.

Conclusion

The aim of this study to Evaluate the effect of White rot-fungi/urea treated wheat straw. In this experiment trial two types of feed will be use. One is wheat straw treated with white rot fungi/urea. It will improve the palatability, digestibility, Conception rate, pregnancy status, Milk yield and enhance the weight gain because when feed is treated (wheat straw with white rot-fungi/urea) then more nutrients will be intake by the animal. And these nutrients will fulfill the requirement of the animal to achieve optimum level of production and healthy reproductive status.

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