

FOREST RESIDUES IN CATTLE FEED

RESÍDUOS FLORESTAIS NA ALIMENTAÇÃO DE BOVINOS

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The ruminants are capable of converting low-quality food, when they are complemented with high-energy source. Through the use of regional agricultural residues is possible to conduct more economical production systems, since energetic foods have high cost in animal production. There is very abundant availability of residues in agroforestry activities worldwide, so that if a small fraction of them were used with appropriate technical criteria they could largely meet the needs of existing herds in the world and thus meet the demands of consumption of protein of animal origin. The Southwest Region of São Paulo State has large area occupied by reforestation and wide availability of non-timber forest residues, which may represent more concentrated energetic food for ruminant production. This experiment aimed to evaluate the acceptability of ground pine (20, 30 and 40%), replacing part of the energetic food (corn), present in the composition of the concentrate and was performed at the Experimental Station of Itapetininga - Forest Institute / SMA, in the dry season of 2011. It were used four crossbred steers, mean 18 months old, average body weight of 250 kg, housed in a paddock provided with water ad libitum and covered troughs for supplementation with the experimental diet. The adjustment period of the animals was of 07 days and the measurement of the levels of consumption, physiological changes, acceptability and physiological parameters were observed during the following 25 days. The concentrate supplement was formulated based on corn (76.2%), Soybean Meal (20%), urea (2%), Ammonium sulfate (0.4%), calcite (1.4%), Mineral Core (1%) and finely ground Pine Cone, replacing corn. In preparing food, the formulas were prepared to make them isoproteic/energetic, containing the following nutrient levels: 22% Crude Protein (CP) and 79% of Total Nutrients (TDN). The animals received the supplement in three steps for each level of cone replaced, being offered in the amount of 1% over the live weight + 10% of intake. The results of the first phase of the research, for steers supplemented in pasture, showed good acceptability and consumption in the three levels of substitution, with an average of 3.0 kg of concentrate per head. No rejection was observed for consumption of the mixture, as well as any physiological negative / change and clinical levels tested. The pine cone (strobilus) without the pine nuts (seeds) was obtained as a residue of genetically improved seed collection. Likely source of tannins and fiber, dried and triturated pine cones can contribute to lower production costs due to the substitution of an ingredient in feed formulation, as an aid in control of internal parasites and also in the possible mitigation of methane gas production, resulting from digestion of ruminants, one of the gases responsible for the greenhouse effect. The potential use of pine cone as an ingredient in replacement of roughage and concentrate in the diet of ruminants qualifies as a new source of revenue in pine forestry activity, since no such product currently has no commercial value. Timber and its accumulation along the dried leaves among the trees, increase the risk of forest fires. Finally, these technological and social innovations result in remarkable potential to leverage Regional Programs Sustainable Development.

Key words: pine, animal feed, forest residues, cattle.