Production and Quality of 15 Days Ages of Corn Herbage as an Alternative Concentrate Ingredient for Young Calves Diet

N.R. Kumalasari, L. Khotidjah, L. Pane, dan R. Maelany
Department of Nutrition and Feed Technology, Faculty of Animal Science, Bogor Agricultural University
Darmaga Bogor

ABSTRACT

Feed takes 60% of production cost. Corn herbage can give high quality feed especially young forage because it contains high protein and it low lignification content. The objectives of this research are to get a methods of high quality forage production to increase cost feed efficiency, and to get an alternative concentrate for calves. This research is divided into three steps of experiment. The first experiment, analyzing production and nutrient corn herbage in 15 days ages; in the second, production of corn herbage and observe the effect of corn herbage on the calves; and third, analyzing forage production cost and compared it to concentrate cost. The Factorial Randomized Complete Design was selected for these experiments. The parameter including dry matter, nutrient contains, organic matter coefficient, palatability, and economic analyzis. The results showed that corn herbage production can did in small box. A tretment by soil medium and hydrophonic nutrient give dry matter production is 136 g DM/m^2, protein contained i.e: 18,30% and organic matter coefficient is 68%, fresh forage is very palatable and feed cost is Rp 858,-. It makes the corn herbage available to use as alternative concentrate.

Key words: herbage, corn, calves, concetrate, alternative

INTRODUCTION

Forage is important ruminant feed, since it contains fibre that is very usefull for rumen health. Ruminant animals consume forage about 10% of body weight a day. Tropical forages are characterized by low quality. Fluctuation of biomass production is dominated by season. The peak of legume and grasses production are recorded in early dry season, and the lowest is in early rainy season (Hidayati, 2001). Low forage quality affects concentrate requirement by ruminant, particularly on dairy intensive farm. This is to maintain productivity and life spend of cows. Use of concentrate in dairy cattle diet leads to increase of ration cost. It is therefore use of high availability, such as 15 days corn herbage is one alternative to reduce diet cost.

Corn herbage can give high quality feed especially young forage because it contains high protein and it harvested before lignification. Corn production is fluctuative, it impacts on price. Corn get lower price when it gain higher production in rainy season since it high water contain. It be a problem for farmer to save the product. Young corn herbage is an alternative product to reduce farmer losses by cultivate corn, harvest on young age and save it for feed in dry season. As concentrate, corn will get a higher price. It can be concentrate alternative since it crude protein contains more than 16% and low fibre.

This research analyzed productivity 15 days age corn herbage and its nutrient contains to get the best feed formulation for young calves to gain cost efficiency, especially from feed. Aim of the research are to obtain appropriate method of corn herbage production in short time, has high quality, applicable for farmer to increasing efficiency of feed cost and to evaluate nutrition value of corn herbage as concentrate alternative

MATERIALS AND METHODS

This research was conducted at Animal Science Faculty, Bogor Agricultural Universityfrom May untill November 2008.

1. **Corn Herbage Production**
   Local corn seeds were grown on soil and water media. In this stage observation on plant growth, biomass production, and optimum harvest time were conducted. This step was conducted at Laboratory of