I. INTRODUCTION

In Egypt as well as many developing countries, the quantities of locally produced feeds are not sufficient to cover the nutritional requirements of the existing livestock population. The feed shortage in summer season is more acute than in winter season where berseem (Egyptian clover), the major winter forage crop, covers a good part of the nutritional requirements of ruminants. Under such conditions, and because of the limited cultivated area in the country and the great competition between man and animal on this area, the most promising mean to solve the feed shortage problem is the efficient utilization of by-products by proper treatment and supplementation.

Since the late forties, active efforts have been made in order to optimize the utilization of crop residues and agro-industrial by-products by chemical treatment especially ammoniation. Crop residues included cereal and legume straws, stover from maize and sorghum and maize cobs.

Klofnestein (1973) in USA, Sundstøl et al. (1978) in Norway and Creek (1984) in Egypt, has demonstrated that ammoniation of fibrous crop residues has improved

their quality in terms of crude protein content, digestibility, energy content and daily intake. Therefore, it seems that ammonia-treated crop residues could share in covering a part of the shortage of animal feeds in Egypt. Therefore, it was intended in the present study to investigate (1) the effect of ammonia treatment on feeding qualities of soybean straw and corn stover and (2) the effect of feeding ammoniated soybean straw and corn stover on the performance of Friesian calves.