I. INTRODUCTION

An abundance of high-quality forage is the foundation for a profitable livestock enterprise. Adequate fertilization of responsive species and varieties is essential for significant improvement of forage quantity and quality. Timely utilization of forage along with efficient, productive livestock maximizes profits.

Traditionally, livestock production in the Southwest has been centered in large landholdings. These have been used as a measure of a man’s wealth, dignity, and social status. When cattle were added to the enterprise, additional land was purchased at nominal cost or obtained by some other means. Thus, the practice of low stocking rates and large acreages for the beef cow herd has dominated the thinking of traditional cattlemen in the Southwest.

This traditional “large acreage-small herd” philosophy has permeated eastward into the higher rainfall pasture areas of the South and Southeast. In addition, the crop farmers’ philosophy was to convert infertile cropland into pasture land. Favorable annual rainfall has been a factor providing “existence,” although substandard, nutrition of cattle. These, plus other factors, have contributed to limited appreciation of forages and minimum development of the forage potential in the Southwest.

The most obvious responses of forages to fertilization are improvements in yield and quality. Nutrient requirements of forages and fertility status of soils on which forage is to be grown are two major criteria for determining fertilization practices. Fertility status of soils used for forage production is usually considerably lower than that of soils used for other crop production.

C. Gray and C. D. Welch (1970, personal communication) reported that 69% of Washington County, Texas pasture soils were low in P (Table 1). The vital role of P, combined with the relatively inefficient uptake of applied P, means that considerable amounts of this nutrient must be applied before increased forage production and quality are realized on the millions of pasture acres in the Southwest.