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GENETIC AND PATH COEFFICIENT ANALYSIS STUDIES IN ALFALFA

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ABSTRACT

The experiment was conducted during 1985-88 with eight alfalfa varieties which showed significant variatio for all the 9 traits studied. Varieties Synthetic 78 and Type 8x9 surpassed all the varieties for green fodder and dry matter yield but the difference between these two varieties was almost negligible.Phenotypic coefficient of variability was mordately high than genotypic coefficient of variability. gcv was low for crude protein 1.99 and maximum 9.38 for green fodder yield. Heritability ranged from 35.20% for mineral matter to 93.60% for plant height. Green fodder yield, dry matter, plant height and tiller number showed high genetic advance. Plant height, tiller number, stem thickness, leaf area, dry matter yield showed highly significant and positive correlation with green fodder yield. Dry matter yield had the largest direct effect which was shone by stem thickness, leaf area and mineral matter. Hence proper importance should be given to plant height, tiller number, stem thickness, leaf area and dry matter yield while launching an improvement programme for the crop through selection.

INTRODUCTION

Alfalfa, the queen of forages has out-standing feeding value, surpassing all other fodders and forages, especially in terms of protein production(Walton,1983). Information on correlation among green fodder yield and yield components and path coefficients on