INCREASING THE PROTEIN CONTENT OF PASTURE 
GRASSES BY FREQUENT LIGHT APPLICATIONS 
OF NITROGEN

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There are many instances cited in literature of increasing protein 
content of various crops by applying nitrogenous fertilizers (1, 2, 3, 
4, 13). There are other instances of increased protein in grasses 
from association with legumes (5, 6) and from the growing of crops on 
soils high in nitrate (7, 12). In many cases the protein content of 
pasture flora has been increased by top-dressings of fertilizers, con-
taining phosphate, lime, or potash (8, 9), mainly by the increased 
cover of various legumes. On much of the cut-over land of Florida, 
however, and in particular the higher sandy lands, pasture legumes 
do not flourish, even when these elements are supplied. Protein 
content has also been increased by frequent mowing of pasture 
grasses (14). The value of frequent top dressings of nitrogenous 
fertilizers for increasing the carrying capacity of pasture grasses has 
been shown (10).

It has been demonstrated at the Florida Experiment Station and 
on many farms throughout the state that certain improved pasture 
grasses make excellent growth throughout a considerable portion of 
the year. Grasses grown on soils with a low nitrogen content, how-
ever, generally contain low percentages of nitrogen, as can be noted 
from analyses given below. Any increase in protein content which 
may be made by fertilizing pasture grasses should make a better 
balanced feed, requiring less high-priced protein supplements for 
grazing dairy cows and fattening beef cattle. Preliminary work in 
1927 indicated that grass top-dressed with sulfate of ammonia not 
only produced a much greater amount of forage when mowed fre-
quently than when not treated with the nitrogen fertilizer, but the 
clippings contained a higher percentage of total nitrogen.

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3Reference by number is to "Literature Cited," p. 853.