

resulted from the poor growth during the winter. In areas where frosts are more frequent and pangolagrass is killed back to the ground, results might be different, because regrowth of pangolagrass would undoubtedly be slower than where only light frosts occurred. However, the bermudagrasses can withstand colder temperatures and should produce more dry matter than the bahiagrasses during the winter months in south Florida even under severe winter conditions.

Clipping test results generally agreed with grazing trials conducted at the Range Cattle Experiment Station (9), where pangolagrass produced the maximum beef gains. However, Coastal bermudagrass did not generally produce greater yearly beef gains than the bahiagrasses, while the clipping results reported here showed a large difference in favor of the bermudagrasses. One explanation for this is that there may be a relatively more efficient utilization of the bahiagrasses when grazed than when clipped as compared to the bermudagrasses. Another explanation may be that the soil moisture or other conditions at the Range Cattle Experiment Station were not as conducive to bermudagrass growth. The beef yield results comparing the different grasses during the winter and early spring months are not reported, so the ability of the bermudagrasses to outyield the bahiagrasses during this period, as shown by the clipping tests, can not be substantiated.

Protein is one of the most important quality factors in assessing the value of a grass or feed. Certain factors that reduce the rate of grass growth will result in an increase in the crude protein content and may affect the pounds of protein absorbed by the tops of the grass and the efficiency of nitrogen utilization by the grass. There were three factors, not directly associated with the rate of nitrogen or grass maturity during this experiment, that were responsible for an increase in protein contents. At least two were associated with a decreased growth rate. Cool weather in the fall of 1958 resulted in reduced grass growth and increased protein levels. From May 9 until October 15, 1958, grasses were harvested each month and immediately fertilized with 45 pounds of nitrogen. The resulting average protein contents remained very constant, from 7.9 to 9.5 percent. Between September 15 and October 15, growth, as presented by yields in Table 2, was reduced, and average crude protein levels increased to 13.5 percent. Reduced grass growth resulted in higher protein levels. However, in almost all in-