

cut at the hay stage than for the same types of grasses plucked from pastures.

Table 2 gives partial mineral analyses of 10 of the grasses cut at the early bloom or hay stage. These were made principally to ascertain the calcium, iron and phosphorus contents of the grasses. Amounts of calcium and iron appear to be about normal, phosphorus rather high. Of these elements phosphorus was the only one added in the fertilizer except the calcium contained in the superphosphate (18 percent P_2O_5) that was used.

In addition to the grasses, various legumes were tested in these early trials. All of those recorded in Table 3 grow well when planted in the fall but during the summer the perennial types die out to a large extent, except White Dutch clover. This survives satisfactorily because self-seeding results in new plants appearing the following fall. As in the case of the grasses (Table 1), the outstanding feature of these legumes is their high content of protein (Table 3). The seeds were inoculated when planted and there were some nodules on the roots of practically all varieties.

Comparison of the protein contents of these grasses and legumes with those reported for mineral soils (4) shows that on Everglades peat grasses averaged 80 and legumes 42 percent higher. No nitrogen was included in the fertilizer nor is any needed for vigorous growth (6) on Everglades peat. It is a matter of considerable economic importance that so high a content of the valuable protein of these grasses is attained without the necessity of using any of the comparatively expensive carriers of nitrogen in the fertilizer mixture. Since the protein

TABLE 4.—MINERAL COMPOSITION OF LEGUMES GROWN ON SAWGRASS PEAT LAND WHEN CUT AT EARLY BLOOM STAGE.

Material	Percent on Oven-dry Basis					
	Ash	Silicon	Calcium	Magnesium	Iron	Phosphorus
Grimm alfalfa ..	7.97	0.043	1.73	0.37	0.028	0.43
Peruvian alfalfa ..	9.21	0.084	2.34	0.36	0.077	0.41
Kansas alfalfa ..	8.73	0.056	1.99	0.39	0.048	0.43
Burr clover	6.85	0.075	1.56	0.31	0.063	0.31
White clover	9.81	0.12	2.45	0.57	0.069	0.45
Red clover	8.60	0.065	2.02	0.63	0.065	0.48
Alsike clover	8.14	0.098	2.07	0.51	0.090	0.48
Hairy vetch	8.21	0.089	1.59	0.51	0.045	0.46
Common vetch ..	10.03	0.079	1.54	0.38	0.035	0.44
Lespedeza	7.48	0.35	2.48	0.60	0.061	0.39