A study of the chemical composition of the forage grasses of the East Texas Timber Country was begun in 1936. Phosphoric acid, lime, and protein were estimated in about 500 samples of 16 species of forage grasses collected in that region at different times during the year. The present paper summarizes the results of the first year of the study.

Description of the Region

The East Texas Timber Country covers an area of about 26,000,000 acres in the northeastern part of Texas (1). The soils of the region form the western part of the great coastal belt of timbered sandy land extending from New Jersey southward along the Atlantic and Gulf seaboards. They are mainly of light texture and color and are low in organic matter and fertility, particularly with respect to total and active (N/5 nitric acid-soluble) phosphoric acid (2). Much of the region is covered with either post-oak or short leaf pine timber.

Range cattle are allowed to run wild through the timber and pick up what forage they may find. The principal deterrent to the development of good beef animals in the region has been the presence of ticks, but with the eradication of the ticks, the question of the quality and the improvement of available forage becomes of increasing importance.

The forage consists of many different species, some of which are not common in the Eastern states. The principal native grasses are little bluestem (Andropogon scoparius) and big bluestem (A. furcatus). Eragrostis species, particularly E. lugens, and Uniola sessiliflora are of great importance in the timber. Paspalums of the setacea group, particularly P. pubescens, form an important part of the woodland forage. Needle grass (Aristida species, principally A. olivacea) together with Poor Joe weed (Diodia teres) provide most of the forage on land which at one time has been under cultivation. The principal "improved" grass is Bermuda grass (Cynodon dactylon), but Dallis grass (Paspalum dilatatum) and Vasey grass (P. urvillei) also provide a great deal of forage. Grass (Axonopus compressus) is not of importance in the northern section of the region, but increases in importance in the southern section until it becomes the dominant forage grass in the eastern section of the Gulf Coast Prairie just south of the East Texas Timber Country. The latter grasses, although not indigenous to the region, are now growing wild throughout the area on favorable soils. Common lespedeza (L. striata) occurs on open land, and early spring considerable forage is provided by a number of the bur clovers.

Collection of Samples

Forage samples were collected from seventeen counties well distributed throughout the area between April and November. Notes were taken as to the location from which samples were taken so that the place was definitely known at subsequent samplings. The stage of maturity of each species noted and the soil type identified. Individual samples consisted entirely of current year's growth of a single species. The samples after cutting were packed loosely in a cheesecloth bag and upon return to the Station were dried in an oven heated to about 45°C. After drying, the samples were ground in a Wiley mill, stored in Mason jars, and analyzed by methods similar to those of the Association of Official Agricultural Chemists for phosphoric acid and protein.