As experimental work is under way by research agencies of the Soil Conservation Service to determine the suitability of plant species for soil erosion control, and as values have not as yet been definitely established, I will confine this discussion to a brief outline of the major plant communities and the important species of the native vegetation of the various soil groups of the southern prairies and plains.

Broadly considered, there are but a few general plant associations in these unforested areas of the south and southwest, these being closely related in their distribution to moisture, temperature, soils and relief. These consist, for the most part, of relatively few genera and not a very large number of species, though associated with the communities of plants most commonly found there are many species of but slight distribution as to numbers and therefore are relatively unimportant.

On the prairies (pedalferc soil area) the coarse grasses largely predominate even on the heavy dark soils. On the plains (pedocalic soil areas) the short grasses predominate on the soils of heavy texture, and coarse bunch grasses are by far the most abundant on the sandy soils. The short grasses of the extreme southern part of the plains is dominated by the curly mesquite grass, but north of about parallel of latitude 32 degrees the buffalo grass and grama grasses take the place of curly mesquite as the dominant members of the plant communities on the heavy soils. Small tree and shrub growth of many species occur in the southern pedocalic area on soils of both heavy and of light texture, these consisting mainly of several species of oaks, and thorny small trees and shrubs. Northward these coarse plants thin out greatly and consist mostly of some small oaks and mesquite trees.

The general relationships of native plants to the several great treeless soil belts indicated on the accompanying sketch map will be briefly outlined. In Texas the southern limits of the plains and prairies occur, these north southward consisting of (1) the southern Chestnut belt; (2) the Brown Soil, and (3) the extreme western belt of desert.

Plants on Soils of the Pedalferc Area

Broadly considered, the humid area wherein the soils of pedalferc development occur, comprise here two great and plant divisions, that is, the of somewhat podzolic development with timber vegetation, and soils (large Rendiznas) which have been developed under grass cover—the prairies. Rainfall here ranges from an average annual of about 25 or 30 inches in the west part, to 50 inches in the eastern.

The native vegetation of the pedalferc area comprises pine, pine and and on the western fringe only hardwoods, mainly oak. Soils these areas are somewhat podzolic characteristic, though they are not true podzols such as are developed typically in northerly latitudes. They are for the most part highly siliceous, light, ed, acid, rather thoroughly leached in organic matter and of low to moderate inherent fertility. Only very small amounts of native grasses occur in the timbered sections, and though growth increases greatly when the timber is cleared away, it is largely of bunch grasses of such types as species of Andropogons panicums and Paspalums.

Native Plants on the Soils of the Prairies

On the prairies the soils for most part are heavy dark soils derived from calcareous formations and the vegetation is very largely of coarse bunch grasses, though the more wet areas have in places considerable short grasses.

The prairies are of 3 distinct communities, each characterized by defini...