The Houdek soil, a deep, well-drained, loamy soil, represents many soils formed in South Dakota under the influence of prairie grass. The dark color of the surface layer is a result of decayed plants and other materials that have been deposited over thousands of years.

The Houdek soil is of major economic importance to South Dakota because it is often used as cropland or rangeland. Small grain, corn, sunflowers, and soybeans are commonly grown crops. Alfalfa and grass-alfalfa mixtures provide hay and pasture for grazing livestock. Large areas of the Houdek soil are in native range. Crops and grasses grown on the Houdek soil also provide habitat for wildlife.

The Houdek soil was designated as the South Dakota State Soil by the 1990 State Legislature. The soil has been mapped on about 600,000 acres. The average annual precipitation is 22 inches, and the average annual air temperature is about 48 degrees F.