

# Major Soil Areas of Missouri

## Their General Characteristics and Agricultural Use

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Missouri is a state of many types of soil. The deep, dark prairie soils of northwestern Missouri contrast to the light colored and stony soils of the Ozark Region. The dark soils with heavy clay subsoil on the level prairies of northeastern Missouri are unlike the brown, deep, permeable soils in the southwestern part of the State. In the Lowland Region of southeastern Missouri light sands are bordered by plastic clays. In like manner the soils vary in fertility from those that produce 70 bushels of corn to those that produce trees only. In spite of many differences, the soils over large areas have similarities in color, texture, depth, topography, and fertility. On the basis of the general similarity of these features, the State has been divided into eight general soil areas. These are outlined and briefly described on the following pages.

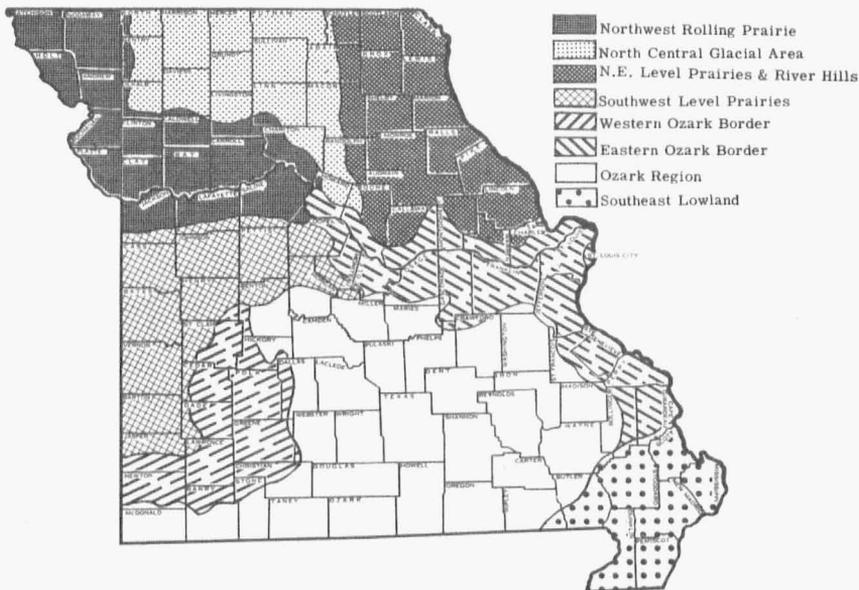
### MAJOR SOIL AREAS

**Area I—Northwest Rolling Prairie.**—The northwest rolling prairie is an area of deep, dark productive soils, and a highly developed agriculture. The large production of hogs and cattle is based on a large production of corn and grass. The productive soils are adapted to a wide range of general crops, and such special crops as fruit, tobacco, and vegetables. The crop production rating is higher than for any other section of the State. Practically all of the land is in intensive agricultural use.

**Area II—North Central Glacial Area.**—The western half of this glacial area has a rolling topography and productive, dark brown, heavy loam soils. The eastern part of the area is moderately hilly and completely dissected. The soils are gray brown in color and shallow in depth. Throughout the area there are many broad river bottoms that are subject to occasional overflow. The soils in the valleys are productive and are used almost exclusively for the production of corn. Corn and oats are the important grain crops on the

upland. Bluegrass thrives everywhere. Much of the land is severely eroded. The type of farming for the entire area is based on the production of livestock.

MAJOR SOIL AREAS IN MISSOURI



**Area III—Northeast Level Prairies and River Hills.**—This area is characterized by extensive level to undulating prairie land, interspersed by rolling forest land along the streams. The prairie soils are dark gray in color, silty in texture, and have a heavy clay subsoil. They are productive and responsive to fertilizer and lime. All of the prairie land is in cultivation. Corn, oats, soybeans, lespedeza, and grass are the important crops. The light colored soils on the rolling land bordering the streams are shallow and erode easily. They originally were forested, but now are mainly used as pasture land. Along the Mississippi river is a band of hilly land, 6 to 12 miles wide. Some of this is too steep for cultivation, but the arable land is productive and used for general farming. In general, the northeastern soil area is highly developed agriculturally, and is well adapted to the production of grain, grass, livestock and to dairying.

**Area IV—Southwest Level Prairies.**—The southwest prairie area is similar in quality of soils and in type of farming to the prairie land areas in the northern part of the State. The soils vary from black in the northern part, to dark gray in the southern part of the

area. Much of the prairie land has heavy clay subsoil. It is a region of general farming, and practically all of the land is utilized for grain or forage production.

**Area V—Western Ozark Border.**—The western Ozark border has a rolling topography but is not hilly like most of the Ozark Region. The soils vary from light brown loams of moderate productivity, to dark brown gravelly loams of good productivity. Most of the land is in cultivation. The type of farming is more diversified than in any other part of the State. Dairying is a major industry, and in parts of the area orchard and small fruits are grown extensively. The farms average smaller than elsewhere in the State. The agricultural development compares favorably with that of the prairie regions in northern Missouri.

**Area VI—Eastern Ozark Border.**—The eastern Ozark border area is hilly, and has a more dissected and rugged topography than the western Ozark border area. The soils are dominantly light brown in color, silty in texture, and of medium or lower productivity. They differ from those of the Ozark Region in that they contain less stone and are more productive. However, much of the land is too steep for cultivation, and is used for pastures and woodlots. Soil erosion is active everywhere. Wheat and corn are the important grain crops. General farming, including dairying, is the common practice.

**Area VII—Ozark Region.**—The Ozark Region includes all of South Central Missouri. The surface is hilly. The soils are shallow, light colored, of relatively low productivity, and contain varying amounts of chert rock. The combination of low soil fertility, stones, and hilly surface, makes it impossible to utilize most of the land for agricultural purposes. More than 60 per cent of the area is forested. The cleared upland is used mainly for pasture. Lespedeza is the all important pasture and hay crop. The narrow creek bottoms are used for corn production. Livestock is the main source of income. Dairying is the major type of farming in Webster and surrounding counties. The Ozark Region is not suited to fruit or special farming, or to small farm units. The possibilities for profitable farming are more limited than in any other part of the State.

**Area VIII—Southeast Lowland.**—The Lowland Region of southeastern Missouri is a level alluvial plain, and includes a wide range of soil and farming conditions. The moderately sandy loam soils along the Mississippi river are very productive and are largely used for cotton and corn. The dark, heavy productive soils of the south central section are used for cotton and soybeans. General farming prevails on the sandy soils in the north central section. The western part of the Lowland has light colored soils. These are largely undeveloped as yet because of low productivity and deficient drainage. In general, the soils and agriculture of the Lowland Region are characterized more by their diversity than by their similarity.

### Climate of Missouri

The soils of Missouri have been influenced by the climate under which they were formed. This is indicated, in part, by the generally darker color of the soils in the northern part of the State, and lighter colors in the southern part. The climate likewise has influenced the occurrence of certain crops. Thus bluegrass thrives best in the northern part, while cotton is confined to the southern edge of the State. There is no significant difference in climate because of difference in altitude. In general, the climate of Missouri is temperate. The average annual temperature ranges from 50°F. in the northwest to 59°F. in the southeast. Periods of extreme cold are of short duration, and the temperature seldom falls lower than 5 to 10 degrees below zero. Short periods of high temperature (90°F. and above) occur nearly every summer. The frost-free period extends from the middle of April to the middle of October. The average annual precipitation ranges from 36 inches in the northwest to 50 inches in the southeast, and as a rule is well distributed throughout the year.