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SOIL SUITABILITY FOR HARDWOODS IN THE BLACKLAND AREA

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The Blacklands occur in two areas of Mississippi, the northeastern and east-central parts. They are found within the much larger Coastal Plains land area, but because of their prairie-like nature and characteristic color, they are grouped separately.

In general, Blackland soils are derived from marly clays and soft limestone. Some have weathered slightly acid, but most are neutral to alkaline. Texture is principally fine or clay-size. The alluvial soils are sufficiently fertile to support excellent growth of some hardwood species, provided that moisture supplies and drainage are adequate. The upland soils are not considered suitable for hardwood timber.

The principal soils that support good stands of hardwoods are listed in table 1. The table is based on observations of natural stands; other growth relations may result when trees are planted. For a particular soil, solid black blocks indicate species that occur frequently and should be favored in future stand management. Grey blocks indicate common species that should be harvested at the first profitable opportunity, but not favored as a component of future stands. Dots show species occurring only occasionally on a particular soil; here again, black means "favor all the way" and grey means "manage, but do not favor". Baldcypress and spruce pine, which are found on the same soils as hardwoods, are listed under the table with other species of limited occurrence.

The terrace soils, Kipling and Geiger, are somewhat poorly to poorly drained clays, medium acid to neutral. Of the bottom-land soils, Marietta and Verona are young alluvium, somewhat poorly to poorly drained, coarse to medium in texture, and neutral to calcareous. Of the fine-textured acid soils, Kaufman is moderately well drained, Houlka is somewhat poorly drained, and Una is poorly drained. Of the fine-textured alkaline group, Catalpa, which is brown, and West Point, which is black, have the best internal drainage, while Tuscumbia has the poorest.

Table 1.--*Soil suitability for hardwoods in the Blackland area*

Important commercial species[1]	Terrace soils[2]: Kipling, Geiger	Bottom soils: Recent coarse and medium-textured: Marietta, Verona	Bottom soils: Fine-textured acid: Kaufman	Bottom soils: Fine-textured acid: Houlka (Urbo)	Bottom soils: Fine-textured acid: Una (Chastain)	Bottom soils: Fine-textured calcareous: Catalpa, West Point-Trinity	Bottom soils: Fine-textured calcareous: Leeper, Tuscumbia
Ash, white or green	▒	■	○	■	■	■	■
Cottonwood, eastern	●	■	●	●	○	■	■
Elms, slippery and Am.	○	▒	○	▒	○	▒	▒
Hackberry & sugarberry	○	■	●	■	▒	■	■
Hickories (exc. water)	○	○	▒	▒	○		
Maple, red	○	▒	○	■	▒		○
Maple, silver	○	○				○	○
Oak, cherrybark	●	●	■	■	■		
Oak, Durand	●	●	■	■		●	●
Oak, Nuttall			●	■	■	○	○
Oak, overcup			○	○	▒		○
Oak, post	▒						
Oak, Shumard	●	●	■	■	○		
Oak, swamp chestnut	○	●	●	■	○	○	
Oak, water	▒	■	●	■	▒	○	○
Oak, white	●		●	●	○		
Oak, willow	○	■	●	■	▒	○	
Persimmon, common	○	○	○	▒	○		
Sweetgum	●	●	■	■	■	●	●
Sycamore, American	○	●	●	●	●	●	●
Tupelo, black	○	○	●	●	○	○	○
Yellow-poplar		●	●	●	○		

1/ Common names are those found in Agriculture Handbook 41, U.S. Department of Agriculture. 1953.
2/ Noneroded phases only.

POST AND SPECIALTY SPECIES: Black locust and catalpa on all well-drained, moist soils; eastern redcedar on all dry soils; Osage-orange on all neutral to alkaline soils; mulberry on all soils.

SPECIES LIMITED COMMERCIALLY OR IN OCCURENCE: Boxelder, winged elm, honeylocust and pecan on all soils; American beech, southern magnolia, spruce pine, American holly, shingle oak, sassafras, and chinaberry on all acid soils; black walnut and black cherry on all well-drained, moist soils; laurel oak and sweetbay on acid, poorly drained soils; black willow and baldcypress on all moist, poorly drained soils.

WEED SPECIES: Hawthorn and privet on all soils; American hornbeam, eastern hophornbeam, roughleaf dogwood, and flatwoods plum on all acid soils; smooth sumac on all moist, well-drained soils; redbud and Hercules-club on terraces and acid soils.

■ Occurs frequently; favor for management. ▒ Occurs frequently; manage, but do not favor.
● Occurs occasionally; favor. ○ Occurs occasionally; manage, but do not favor.

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