



## Diospyros spp.

Family: Ebenaceae

### Common Persimmon

The genus *Diospyros* contains about 400 species (including ebony) mostly native to the tropics (Madagascar, Africa and Malaysia), with two native to the United States. The name *diospyros* is derived from the Greek, for the god Zeus or Jupiter and grain, alluding to the edible fruit or "fruit of the gods."

*Diospyros kaki*-Oriental persimmon (Japan) (commercial fruits).

*Diospyros texana*-Black persimmon, chapote, common sweetleaf, Florida laurel, horse sugar, Mexican persimmon, Spanish chapote, sweetleaf, **Texas persimmon**, yellow-wood.

*Diospyros virginiana*\*-Bara bara, boawood, butterwood, **common persimmon**, cyllil date plum, date plum, eastern persimmon, echtes persimmon, Florida persimmon, plaqueminer, possumwood, seeded plum, simmon, Virginia date palm, winter plum.

\*commercial species

The following description is for the North American species.

### Distribution

North America, from Connecticut, New York and New Jersey west to Ohio, Illinois, Iowa, Missouri and Kansas, south to Oklahoma and Texas, east to Florida including the Florida Keys.

### The Tree

Persimmon trees are slow growing. They produce small white flowers shaped like lanterns or bells. The fruits are eaten by woodland animals and by people (after the first frost or the fruit puckers the lips). The tree attains a height of 80 ft (24 m) and a diameter of 2 ft (0.6 m). The bark develops thick square blocks, like alligator skin. Persimmon grows in disturbed areas and in deciduous woodlands in association with hickory, oak, sycamore, maple, red cedar, tulip poplar and elm. It masts every 2 years.

### The Wood

#### General

The sapwood is white, darkening to a grayish brown, while the small heartwood is dark brown to black (like ebony) and streaked. The wood is uniform in texture, stiff, strong, heavy, hard, and is resilient to pressure. The wood has no characteristic odor or taste. It is semi-ring-porous. Persimmon is sometimes confused with hickory.

#### Mechanical Properties (2-inch standard)

	Specific gravity	MOE GPa	MOR MPa	Compression		WML <sup>a</sup> kJ/m <sup>3</sup>	Hardness N	Shear MPa
				Parallel MPa	Perpendicular MPa			
Green	.64	9.4	69.0	28.8	7.7	89.6	5693	10.1

Dry	.78	13.9	122.0	63.2	17	106.2	10230	14.9
<sup>a</sup> WML = Work to maximum load.								
<sup>b</sup> Reference (98).								
<sup>c</sup> Reference (59).								

**Drying and Shrinkage**

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	11.2	9.0	3.7
Radial	7.9	6.3	2.6
Volumetric	19.1	15.3	6.4

<sup>a</sup>Birch shrinks considerably during drying. References: 0% MC (98), 6% and 20% MC (90).

**Kiln Drying Schedules<sup>a</sup>**

Condition	Stock			
	4/4, 5/4, 6/4	8/4	Golf club heads	Shuttles
Standard	T6-C3	T3-C2	T3-C2	T3-B2

**Working Properties:** Persimmon is hard to work with tools and it does not glue easily.

**Durability:** Persimmon heartwood is very resistant to decay, but the sapwood is nonresistant.

**Preservation:** No information available at this time.

**Uses:** Shuttles, spools, bobbins, billiard cues, parquet floors, turnery, golf club heads, shoe lasts, veneer and handles.

**Toxicity:** Heartwood may cause dermatitis (105).

**Additional Reading and References Cited (in parentheses)**

6. Boone, R.S.; Kozlik, C.J.; Bois, P.J.; Wengert, E.M. 1988. Dry kiln schedules for commercial woods-temperate and tropical. Gen. Tech. Rep. FPL-GTR-57. Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory.

29. Elias, T.S. 1980. The complete trees of North America, field guide and natural history. New York: van Nostrand Reinhold Company.

55. Little, Jr., E.L. 1979. Checklist of United States trees (native and naturalized). Agric. Handb. 541. Washington, DC: U.S. Department of Agriculture, Forest Service. U.S. Government Printing Office.

59. Markwardt, L.J.; Wilson, T.R.C. 1935. Strength and related properties of woods grown in the United States. Tech. Bull. 479. Washington, DC: U.S. Department of Agriculture, Forest Service. U.S. Government Printing Office.

68. Panshin, A.J.; de Zeeuw, C. 1980. Textbook of wood technology, 4th ed. New York: McGraw-Hill Book Co..

74. Record, S.J.; Hess R.W. 1943. Timbers of the new world. New Haven, CT: Yale University Press.

86. Simpson, W.T. 1991. Dry kiln operator's manual. Ag. Handb. 188. Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory.

90. Summitt, R.; Sliker, A. 1980. CRC handbook of materials science. Boca Raton, FL: CRC Press, Inc. Vol. 4.

98. U.S. Department of Agriculture. 1987. Wood handbook: wood as an engineering material. Agric. Handb. 72. (Rev.) Washington, DC: U.S. Department of Agriculture. 466 p.

105. Woods, B.; Calnan, C.D. 1976. Toxic woods. British Journal of Dermatology. 95(13): 1-97.