

TABLE 6.—Recommended tree and shrub species, their arrangement in shelterbelts, and their adaptation to soils

KANSAS

Group and species	Sequence of rows ¹	Approximate height and position in shelterbelt									Adaptation to soil classes ²						Remarks	
		Under 15 feet	10-25 feet	20-40 feet	30-50 feet	Over 50 feet	30-50 feet	20-40 feet	10-25 feet	Under 15 feet	Uplands			Terraces				Low wet soils
											Sands ³	Sandy loams ⁴	Fine-textured soils ⁵	Sands ³	Sandy loams ⁴	Fine-textured soils ⁵		
Hardwoods:																		
Cottonwood (<i>Populus</i> sp.).....	1				X						Fa	Fa	—	F+	F+	F+	G	a Does fairly well on uplands in eastern part of shelterbelt zone.
English elm (<i>Ulmus campestris</i> L.).....	2			X		X						E	E	E	E	E	E	
Dwarf Asiatic elm (<i>Ulmus pumila</i> L.).....	3			X		X					F+	G	G	F+	G	G	E	
Hackberry (<i>Celtis occidentalis</i> L.).....	4			X		X					G	G	G	G	G	G	G	
Coffeetree (<i>Gymnocladus dioica</i> (L.) Koch.).....	5			X		X						E	E		F	F	F	
Honeylocust (<i>Gleditsia triacanthos</i> L.).....	6			X		X					E	G	G	E	G	G	G	
American elm (<i>Ulmus americana</i> L.).....	7			X		X					E	F-	F	E	F+	F+	F+	
Sycamore (<i>Plantanus occidentalis</i> L.).....	8			X		X									F	F	F	
Russian mulberry (<i>Morus alba tatarica</i> (L.) Loudon.).....	9			X		X					E	G	G	F	G	G	E	
Black locust (<i>Robinia pseudoacacia</i> L.).....	10			X		X					a	a	—	F	F	F	G	a Can be used sparingly on uplands in southeast part of zone; use liberally in gully planting.
Green ash (<i>Fraxinus pennsylvanica lanceolata</i> (Borkh.) Sarg.).....	11			X		X					—	a	a	—	F	F	G	a Could be used to some extent in eastern half of zone. Borer damage usually severe on uplands.
Black walnut (<i>Juglans nigra</i> L.).....	12			X		X					—	E	E	—	F	F	F	
Ailanthus (<i>Ailanthus altissima</i> (Mill.) Swingle.).....	13			X		X					E	F-	F-	E	F	F	E	
Hardy catalpa (<i>Catalpa speciosa</i> Warder.).....	14			X		X					—	a	—	F	F+	F+	F	a Could be used in eastern half of zone wherever water table is close to surface.
Bur oak (<i>Quercus macrocarpa</i> Michx.).....	15			X		X					E	E	E	E	E	E	E	
Ossage-orange (<i>Toxylon pomiferum</i> Raf.).....	16			X		X					E	G	G	F	G	G	G	
Apricot (<i>Prunus</i> sp.).....	17			X		X					E	G	G	E	G	G	E	
Pecan (<i>Hicoria pecan</i> (Marsh.) (Britt.).....	18			X		X					—	E	E	—	E	E	E	Use only in southeast part of zone.
Western soapberry (<i>Sapindus drummondii</i> H. and A.).....	19			X		X					F+	F	F	G	F+	F+	G	Use only in southern one-third of State.
Conifers:																		
Ponderosa pine (<i>Pinus ponderosa</i> Laws.).....	20			X							F	F	E	F	F	E	—	Ordinarily 1 row is enough; keep 10 feet from adjoining rows of hardwoods.
Austrian pine (<i>Pinus nigra austriaca</i> Schneid.).....	21			X							E	E	E	E	E	E	E	Do.
Eastern red cedar (<i>Juniperus virginiana</i> L.).....	22			X			X				F	G	G	G	G	G	E	Ordinarily use not over 2 rows; keep 10 feet from adjoining rows of hardwoods.
Rocky Mountain red cedar (<i>Juniperus scopulorum</i> Sarg.).....	23			X			X				F	G	G	G	G	G	E	Do.
Tall shrubs:																		
Redbud (<i>Cercis canadensis</i> L.).....	24		X					X			—	F	F	—	F+	F+	E	
Russian-olive (<i>Elaeagnus angustifolia</i> L.).....	25		X					X			F+	G	G	G	G	G	F	
Wild plum (<i>Prunus americana</i> Marsh.).....	26		X					X			—	F	F	—	F	F	F	
Choke cherry (<i>Prunus virginiana</i> L.).....	27		X					X			G	G	G	G	G	G	G	Good for gully planting because of suckering.
Tamarisk (<i>Tamarix</i> sp.).....	28		X					X			G	G	G	G	G	G	G	Use sparingly in north half of State.
Roughleaf dogwood (<i>Cornus asperifolia</i> Michx.).....	29		X					X			—	F	F	F	F	F	G	
Low shrubs:																		
American elder (<i>Sambucus canadensis</i> L.).....	30	X							X		—	—	—	—	F-	F-	F+	
Lilac (<i>Syringa</i> sp.).....	31	X							X		E	G	G	E	G	G	E	Use for appearance value near roads, gates, ends of rows.
Slender golden currant (<i>Ribes aureum</i> Pursh.).....	32	X							X		E	G	G	E	G	G	G	
Lemonade sumac (<i>Rhus trilobata</i> Nutt.).....	33	X							X		E	F	F	F	F	F	E	Do.
Sand plum (<i>Prunus angustifolia watsonii</i> Waugh.).....	34	X							X		G+	G+	F	G+	G+	F	—	
		North or east		Orientation.....						South or west								

¹ From center line of shelterbelt outward, any species having a larger number in this column will be planted in 1 or more rows outside the row or rows of any species having a smaller number. Ordinarily 1 or more species will be selected from each of the 4 groups indicated in the first column.

² Meaning of symbols: G, good adaptation to soil indicated; F, fair; E, for experimental use in very small amount; —, poor, do not use; + or —, somewhat better or poorer than letter rating. Small letters refer to remarks in same line in last column. It is assumed that the following soils will be avoided, except experimentally: Coarse gravel soils, undrained basins (buffalo wallows), shale-derived clays, alkaline basins, claypan soils.

³ Includes sands, loamy sands, and loamy fine sands.

⁴ Includes sandy loams and fine sandy loams.

⁵ Includes all soils of finer texture than the above; i. e., very fine sandy loams, loams, silt loams, silty clay loams, clay loams, clays.