

TABLE 4.—Recommended tree and shrub species, their arrangement in shelterbelts, and their adaptation to soils

SOUTH DAKOTA

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	20-35 feet	30-50 feet	Over 50 feet	30-50 feet	20-35 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					Ga	Fb	Fb	G	G	F+	G	a Keep off dunes. b Could be used as temporary row or 2 on uplands.	
European white willow (<i>Salix alba</i> L.).....	2					X					—	—	—	—	—	—	G	a Keep off dunes.	
Dwarf Asiatic elm (<i>Ulmus pumila</i> L.).....	3				X		X				Fa	G	G	G	G	G	G	Do.	
American elm (<i>Ulmus americana</i> L.).....	4				X		X				Fa	G	F	F	G	G	G		
Hackberry (<i>Celtis occidentalis</i> L.).....	5				X		X				G	G	G	G	G	G	G		
Honeylocust (<i>Gleditsia triacanthos</i> L.).....	6				X		X				F—	F—	F	G	F+	F	G	Use sparingly in northern half of State.	
Green ash (<i>Frazinus pennsylvanica lanceolata</i> (Borkh.) Sarg.).....	7				X		X				—	Fa	Fa	G	G	G	G	a Use not more than 2 to 4 rows on uplands because of possible borer damage.	
Black walnut (<i>Juglans nigra</i> L.).....	8				X		X				—	Ea	Ea	—	F	F+	F+	a Use only in eastern half of shelterbelt zone, occasionally elsewhere in rich soils.	
Bur oak (<i>Quercus macrocarpa</i> Michx.).....	9				X		X				E	E	E	E	E	E	E	Use only in small quantities until it can be propagated successfully.	
Conifers:																			
Ponderosa pine (<i>Pinus ponderosa</i> Laws.).....	10			X					X		G—	G—	F	G—	G	F	—	Ordinarily use not more than 2 rows; keep 10 feet from adjoining rows of hardwoods.	
Scotch pine (<i>Pinus sylvestris</i> L.).....	11			X							E	E	E	E	E	E	E	Use experimentally until good seed source is found. Keep 10 feet from adjoining rows of hardwoods.	
Austrian pine (<i>Pinus nigra austriaca</i> Schneid.).....	12			X							E	E	E	E	E	E	E	Do.	
Blue spruce (<i>Picea pungens</i> Engelm.).....	13			X							—	F	F	—	F+	F+	F+	Use not more than 1 row. Keep 10 feet from hardwood rows.	
Eastern red cedar (<i>Juniperus virginiana</i> L.).....	14			X					X		F+	G	G	G	G	G	G	Ordinarily use not over 2 rows. Keep 10 feet from hardwood rows.	
Rocky Mountain red cedar (<i>Juniperus scopulorum</i> Sarg.).....	15			X					X		F+	G	G	G	G	G	G	Do.	
Tall shrubs:																			
Russian mulberry (<i>Morus alba tatarica</i> (L.) Loudon.).....	16		X							X	F+	G	F	G	G	G	G	Use only in southern one-third of State.	
Russian-olive (<i>Elaeagnus angustifolia</i> L.).....	17		X							X	G—	G	G	G	G	G	G		
Buffalobery (<i>Shepherdia argentea</i> Nutt.).....	18		X							X	E	G	G	E	G	G	—	Suckering sometimes objectionable.	
Siberian pea-tree (<i>Caragana arborea</i> Lam.).....	19		X							X	—	G	G	—	G	G	—		
Choke cherry (<i>Prunus virginiana</i> L.).....	20		X							X	G	G	G	G	G	G	G		
Serviceberry (<i>Amelanchier canadensis</i> (L.) Medicus.).....	21		X							X	E	E	E	E	E	E	E		
Hawthorn (<i>Crataegus</i> sp.).....	22		X							X	E	E	E	E	E	E	E	Use not more than 1 row; keep away from cedar because of cedar apple rust.	
Wild plum (<i>Prunus americana</i> Marsh.).....	23		X							X	F	F	F—	F	F	F	G		
Low shrubs:																			
Tatarian honeysuckle (<i>Lonicera tatarica</i> L.).....	24	X								X	E	G	F	E	G	G	F+		
Nannyberry (<i>Viburnum lentago</i> L.).....	25	X								X	E	E	E	E	E	E	E		
Lilac (<i>Syringa</i> sp.).....	26	X								X	F	G	G	G	G	G	G	Use mainly for appearance value in clumps or short sections.	
Western snowberry (<i>Symphoricarpos occidentalis</i> Hook.).....	27	X								X	E	E	E	E	E	E	E		
Sumac (<i>Rhus</i> sp.).....	28	X								X	E	E	E	E	E	E	E		
		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 droughty gravels, claypan soils, undrained alkaline basins (buffalo wallows), shale-derived upland soils along Missouri River.

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.