

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES I & II

Only the soils suitable for production of commercial trees are listed in this guide. Absence of an entry in a column means the information was not available. *Those entries marked with an asterisk are estimates.

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Alda	3o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton-wood	70*	Eastern cotton-wood
Broken Alluvial Land	<p>This land type is in narrow intermittent drainageways that are frequently flooded. The soil material is deep and predominantly silty. Thin layers and strata of coarser materials are in some places. The areas consist of deep channels meandering across nearly level bottoms. The channel banks are often steep. Areas are narrow but range up to several miles in length.</p> <p>These are usually good soils for green ash, common hackberry, and eastern cottonwood. However, site quality may be variable from <u>fair</u> to <u>excellent</u> within short distances.</p>								
Canyons & Breaks along Niobrara River in MLRA 65; N&E slopes; steep									
Duda	3r	15-35% - Moderate 35%+ - Severe	15-35% - Moderate 35%+ - Severe	Slight	Slight	Slight	Ponderosa pine	65	Ponderosa pine
Keota	3r	15-35% - Moderate 35%+ - Severe	15-35% - Moderate 35%+ - Severe	Slight	Slight	Slight	Ponderosa pine	60	Ponderosa pine
Marjavi	2d	Severe	15-35% - Moderate 35%+ - Severe	Moderate	Moderate	Slight	Ponderosa pine	55	Ponderosa pine
Ronson	4r	15-35% - Moderate 35%+ - Severe	15-35% - Moderate 35%+ - Severe	Slight	Slight	Slight	Ponderosa pine	75	Ponderosa pine
Tassel	2d	Severe	15-35% - Moderate 35%+ - Severe	Moderate	Moderate	Slight	Ponderosa pine	55	Ponderosa pine
Valentine	4r	Severe	Severe	Moderate	Slight		Ponderosa pine	70	Ponderosa pine

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES I & II

Name of Soil or Land Type	Ordination Symbol	Management Concerns				Potential Productivity			Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Canyon-Bridget-Rock-Outcrop Assoc., N&E slopes; steep									
Bridget	4r	0-15% - Slight 15-35% - Moderate 35%+ - Severe	0-15% - Slight 15-35% - Moderate 35%+ - Severe	Moderate	Slight	Slight	Ponderosa pine	70	Ponderosa pine
Busher	4r	0-15% - Slight 15-35% - Moderate 35%+ - Severe	0-15% - Slight 15-35% - Moderate 35%+ - Severe	Moderate	Slight	Slight	Ponderosa pine	70	Ponderosa pine
Canyon	2d	Severe	Severe	Moderate to Severe	Moderate to Severe	Slight	Ponderosa pine	53	Ponderosa pine
Duroc	5o	Slight	Slight	Slight	Slight	Slight	Ponderosa pine	80	Ponderosa pine
Oglala	4r	0-15% - Slight 15-35% - Moderate 35%+ - Severe	0-15% - Slight 15-30% - Moderate 35%+ - Severe	Moderate	Slight	Slight	Ponderosa pine	69	Ponderosa pine
Ulysses	4r	0-15% - Slight 15-35% - Moderate 35%+ - Severe	0-15% - Slight 15-30% - Moderate 35%+ - Severe	Moderate	Slight	Slight	Ponderosa pine	69	Ponderosa pine
Caruso loam	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood Green ash	85*	Black walnut Silver maple Green ash Common Hackberry Eastern cottonwood
Cozad sil	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	62*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES I & II

Name of Soil or Land Type	Ordination Symbol	Management Concerns				Potential Productivity			Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Elsmere fs, lfs, fsl	3s	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	70	Eastern cotton-wood
Gering loam	2o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	65*	Eastern cotton-wood
Glenburg fsl	2o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	65*	Eastern cotton-wood Green ash Bur oak Common hack-berry
Haverson sil, fsl	4o	Slight	Slight	Sil, fsl - Slight Sic1 - Moderate	Slight	Moderate	Eastern cotton wood Green ash Bur oak	80*	Green ash Bur oak Common hack-berry Eastern cotton-wood
Hobbs sil, sic1, 0-3%	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hack-berry Eastern cottonwood	60*	Black walnut Silver maple Common hack-berry Green ash Eastern cotton-wood Bur oak
Humbarger loam, sil	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hack-berry Eastern cotton wood	60*	Black walnut Silver maple Green ash Common hack-berry Bur oak
Las loam, fsl	3o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	75*	Eastern cotton-wood Green ash Common hack-berry
Las Animas lfs, fsl, loam	3o	Slight	Somewhat poorly drained - Slight	Fsl, loam - slight	Slight	Moderate	Eastern cotton wood	70*	Eastern cotton-wood
lfs	5w	Slight	Poorly drained - Severe	Lfs - Moderate	Moderate	Moderate			
Lawet loam	2w	Slight	Severe	Moderate	Moderate	Severe	Eastern cotton wood	60	Eastern cotton-wood
Lex loam, sil	3o	Slight	Slight	Moderate	Slight	Moderate	Eastern cotton wood	70*	Eastern cotton-wood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES I & II

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Windthrow Hazard	Plant Competition	Common Trees	Site Index	
Loamy Alluvial Land		This land type is on frequently flooded bottom lands adjacent to the Platte River or in drainageways. Intermittent streams or gullies meander across these bottom lands. Areas are mostly long and narrow but range up to about 300 acres in size. The soil is shallow to deep, forming in stratified, calcareous, silty material (usually Platte-like and Haverson-like soils). Flooding is frequent but the duration of inundation is short.							
		These are usually good soils for green ash and eastern cottonwood. However, site quality may be variable from <u>poor</u> to <u>excellent</u> within short distances.							
McCook vfs1, loam, sil	2o	Slight	Slight	Slight	Slight	Moderate	MLRA 73 only: Black walnut Green ash Common hackberry Eastern cottonwood Other MLRAs: Eastern cottonwood	55 80*	MLRA 73 only: Black walnut Silver maple Green ash Common hackberry Bur oak Eastern cottonwood Other MLRAs: Eastern cottonwood
McGrew loam	3o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood	70*	Eastern cottonwood
Mixed Alluvial Land		This land type consists of recent alluvial deposits bordering the channel of the North Platte or Platte River. The areas are cut by numerous cross channels of the rivers themselves or by intermittent streams. Soil material is loamy or sandy and is shallow to moderately deep over sand and gravel (usually Platte-like, Barney-like, and Gothenburg-like soils). The areas have a high water table and are frequently flooded.							
		These are usually good soils for green ash and eastern cottonwood. However, site quality may be variable from <u>poor</u> to <u>excellent</u> within short distances.							
Ord fsl, loam	2s	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood	60*	Eastern cottonwood
Ovina fsl	3o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood	70*	Eastern cottonwood
Platte loam fsl	2w	Slight	Severe	Moderate	Moderate	Moderate	Eastern cottonwood	65	Eastern cottonwood
Rough Broken Land, Loess		This land type consists of canyons and deeply entrenched drainageways with very steep to near vertical side slopes. Catsteps on the slopes and eroding channels are common. The soil material is pale brown or reddish brown silty loess that is calcareous. Soils of the Coly and Uly series occur on side slopes.							
		These are generally good sites for ponderosa pine on the steep north and east slopes. The bottoms are usually good sites for common hackberry and green ash.							
Sandy Alluvial Land		This land type consists of recent flood deposition adjacent to channels of rivers and streams in Red Willow, Hitchcock, Dundy, and Dawes Counties. The soil material is stratified sands with thin layers of silty or loamy material. In some areas the underlying material is coarse sand and gravel (usually Glenburg-like, Bankard-like, and Las Animas-like soils). These areas are subject to frequent flooding. They are commonly dissected by numerous abandoned channels, and during highest streamflow, these channels are filled with water.							
		These are usually fair soils for eastern cottonwood growth. However, site quality may be variable from <u>fair</u> to <u>poor</u> within short distances.							

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES I & II

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Silver Creek sil	4c	Slight	Slight	Severe	Severe	Moderate	Eastern cotton wood Green ash	80*	Eastern cotton-wood Silver maple Green ash
Wann fsl, loam	3o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	70*	Eastern cotton-wood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Only the soils suitable for production of commercial trees are listed in this guide. Absence of an entry in a column means the information was not available. *Those entries marked with an asterisk are estimates.

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Albaton sic, sicl	4w	Slight	Severe	Sicl - Moderate Sic - Severe	Moderate	Severe	Eastern cotton wood Green ash Silver maple	85*	Eastern cotton-wood Silver maple Green ash
Alcester sil 11-60% N&E slopes	3r	Severe	Severe	Slight	Slight	Slight	Black walnut Green ash Common hackberry Bur oak American basswood	60*	Black walnut Northern red oak Green ash Common hackberry American basswood
Alda l, vfst, fst	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Green ash	80*	Eastern cotton-wood Green ash Silver maple
Alluvial Land	This land type is along drainageways in nearly level areas that are subject to frequent flooding. The areas include the meandering stream channel. Soils are mostly stratified silt loams and loams (Hobbs-like soils).								
-	These are usually good soils for black walnut, silver maple, green ash, common hackberry, and eastern cottonwood. However, site quality may be variable from <u>fair</u> to <u>excellent</u> within short distances.								
Aowa sil	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Silver maple Black walnut Green ash Common hackberry	90 68	Black walnut Silver maple Green ash Common hackberry Eastern cotton-wood
Blake	5o	Slight	Slight	Moderate	Slight	Moderate	Eastern cotton wood Black walnut Silver maple Green ash	90* 68*	Black walnut Silver maple Green ash Common hackberry Eastern cotton-wood
Blencoe	4c	Slight	Severe	Severe	Moderate	Moderate	Eastern cotton wood Green ash	85*	Eastern cotton-wood Silver maple
Blyberg sic sil	4o 4c	Slight Slight	Sil - Slight Sic - Moderate	Sil - Slight Sic - Severe	Slight Slight	Moderate Moderate	Eastern cotton wood Green ash Black walnut	85 65	Black walnut Green ash Silver maple Common hackberry Eastern cotton-wood
Boel loam, fst lfs	4o 4s	Slight Slight	Slight Slight	Slight Moderate	Slight Slight	Moderate Moderate	Eastern cotton wood Green ash	80*	Eastern cotton-wood Silver maple Green ash

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Breaks Alluvial Land		<p>This land type consists of steep and very steep breaks and narrow, nearly level areas of alluvial land along drainageways of the uplands. Soils on the narrow alluvial lands are stratified silt loams and loams (Hobb-like soils). A small stream channel is usually entrenched in the alluvial land part. The side slopes along the breaks are usually silt or loamy depending on the adjacent soils (Geary-like, Hastings-like, Holdrege-like, or Coly-like soils). The breaks have a very high erosion potential while the alluvial land is subject to frequent flooding.</p> <p>These are usually good soils for black walnut, green ash, common hackberry, bur oak, or eastern cottonwood on the alluvial part and ponderosa pine, Austrian pine, and Scotch pine on the breaks part.</p>							
Broken Alluvial Land		<p>This land type is in narrow intermittent drainageways that are frequently flooded. The soil material is deep and predominantly silty. Thin layers and strata of coarser materials are in some places. The areas consist of deep channels meandering across nearly level bottoms. The channel banks are often steep. Areas are narrow but range up to several miles in length. Included are areas of Hobbs soils.</p> <p>These are usually good soils for black walnut, silver maple, green ash, common hackberry, and eastern cottonwood. However, site quality may be variable from <u>fair</u> to <u>excellent</u> within short distances.</p>							
Butler sil	3o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	70*	Eastern cotton-wood Green ash
Calco sil, sicl	5w	Slight	Severe	Moderate	Moderate	Severe	Eastern cotton wood Green ash Silver maple	90*	Eastern cotton-wood Green ash Silver maple
Caruso loam	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Green ash Black walnut Common hackberry	85* 65*	Black walnut Silver maple Common hackberry Green ash Eastern cotton-wood
Cass loam, fsl	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Black walnut Green ash Common hackberry	90* 70*	Black walnut Silver maple Green ash Common hackberry Eastern cotton-wood
Clamo sic	4w	Slight	Severe	Moderate	Moderate	Severe	Eastern cotton wood	80*	Eastern cotton-wood
Colo sil, sicl	5w	Slight	Severe	Moderate	Moderate	Severe	Eastern cotton wood Black walnut Common hackberry	90* 68 75	Black walnut Silver maple Common hackberry Green ash Eastern cotton-wood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Coly & Hobbs sil 2 to 60%		This unit consists of canyons and deeply entrenched drainageways with very steep to near vertical side slopes. Catsteps on the slopes and eroding channels are common. The soil material is pale brown or reddish brown silty loess that is calcareous. Soils of the Coly series occur on side slopes and frequently flooded Hobbs soils are on the bottom.							
		These are generally good sites for ponderosa pine, Austrian pine, or Scotch pine on the steep north and east slopes. The bottoms are usually good sites for black walnut, common hackberry, bur oak, and green ash.							
Cozad sil sic1	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood	68*	Black walnut Silver maple Green ash Common hackberry
Crofton sil 15-30% N&E slopes	1r	15-30% - Moderate 30-60% - Severe	15-30% - Moderate 30-60% - Severe	Slight	Slight	Moderate	Bur oak Common hackberry Basswood	40	Bur oak Northern Red oak American Basswood Common hackberry
Els fs	2s	Slight	Slight	Severe	Slight	Moderate	Eastern cotton wood	65*	Eastern cottonwood
Elsmere lfs, fs1	3s	Slight	Slight	Moderate	Slight	Moderate	Eastern cotton wood	70	Eastern cottonwood
Fillmore sil	2w	Slight	Severe	Moderate	Moderate	Severe	Eastern cotton wood	65*	Eastern cottonwood
Forney sil, sic	4w	Slight	Severe	Severe	Moderate	Severe	Eastern cotton wood	80*	Eastern cottonwood
Geary sil, sic1, 11-30% N&E slopes	3r	Moderate	Moderate	Slight	Slight	Moderate	Black walnut Green ash Common hackberry	65* 72*	Black walnut Common hackberry Green ash Bur oak
Gibbon sil, sic1	5o	Slight	Slight	Moderate	Moderate	Moderate	Eastern cotton wood	90*	Eastern cottonwood Silver maple Green ash
Grable vfs1	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Black walnut Common hackberry Green ash	90* 70* 68* 69*	Black walnut Silver maple Green ash Eastern cottonwood
Grigston sil	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Black walnut Green ash Common hackberry	85* 65*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Gullied Land		<p>This land type consists of areas along drainageways that have been deeply cut by gully erosion. The areas are long and narrow. The soil material is mainly silt loam or silty clay loam (usually Ida-like or Crofton-like soils). Uncontrolled, degrading and sluffing of side banks can cause gullies that range from 6 to 40 feet in depth. In upland areas, drainageways have been cut by erosion during periods of high rainfall and excessive runoff.</p> <p>These are usually fair soils for bur oak, northern red oak, and American basswood. However, site quality may vary from <u>fair</u> to <u>poor</u> within short distances.</p>							
Hall sil 0-3%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood	70*	Black walnut Silver maple Common hackberry Green ash
Haynie sil	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Silver maple Black walnut Green ash Common hackberry	90 68	Black walnut Silver maple Common hackberry Green ash Eastern cottonwood
Hobbs sil 0-3%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Silver maple Green ash Common hackberry Eastern cotton wood	68*	Black walnut Silver maple Green ash Common hackberry
Hord sil, sicl, fsl, 0-3%	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Silver maple Green ash Common hackberry Eastern cotton wood	62*	Black walnut Silver maple Common hackberry Green ash
Humbarger sil	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood	65*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Ida sil, 17-30% 30-60% N&E slopes	1r	17-30% - Moderate 30-60% - Severe	17-30% - Moderate 30-60% - Severe	Slight	Slight	Slight	Bur oak Northern Red oak American basswood Common hackberry Green ash	45	Bur oak Northern red oak American basswood Common hackberry
Inavale lfs, fsl fs, ls	3s	Slight	Slight	lfs, fsl, ls - Moderate fs - Severe	Slight	Moderate	Eastern cotton wood	66	Eastern cottonwood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Judson sil sicl, 0-7%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood Northern red oak American basswood	70 70	Black walnut Silver maple Green ash Common hackberry Northern red oak American basswood
Kennebec sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood	75 70 90*	Black walnut Silver maple Green ash Common hackberry
Kipson sil 7-31% N&E slopes	2r	Moderate	Severe	Slight	Moderate	Moderate	Bur oak Common hackberry	50*	Bur oak Common hackberry
Lamo sil, sicl	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Green ash	85*	Eastern cottonwood Silver maple Green ash
Lamoure sil, sicl	4w	Slight	Severe	Moderate	Slight	Moderate	Eastern cotton wood Green ash	85*	Eastern cottonwood Silver maple Green ash
Lawet l, sil	2w	Slight	Severe	Moderate	Moderate	Severe	Eastern cotton wood	60	Eastern cottonwood
Leshara sil, fsl	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Green ash	85*	Eastern cottonwood Green ash Silver maple
Lex sil, loam	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	80*	Eastern cottonwood
Loamy Alluvial Land	<p>This land type is on frequently flooded bottom lands adjacent to the Platte River or in drainageways. Intermittent streams or gullies meander across these bottom lands. Areas are mostly long and narrow but range up to about 300 acres in size. The soil is shallow to deep forming in stratified calcareous, silty material (usually Platte-like soils). Flooding is frequent but the duration of inundation is short.</p> <p>These are usually good soils for green ash and eastern cottonwood. However, site quality may be variable from <u>poor</u> to <u>excellent</u> within short distances.</p>								
Luton sic, sicl	4w	Slight	Severe	Severe	Severe	Severe	Eastern cotton wood Green ash	85	Eastern cottonwood Green ash

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Maria-ville Keota sil, 15-60% N&E slopes									
-Maria-ville part	2d	Severe	15-35% - Moderate 35%+ - Severe	Moderate	Moderate	Slight	Ponderosa pine	55	Ponderosa pine
-Keota part	3r	15-35% - Moderate 35%+ - Severe	15-35% - Moderate 35%+ - Severe	Slight	Slight	Slight	Ponderosa pine	60	Ponderosa pine
McCook loam, fs1, sil	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood Bur oak	62* 85*	Black walnut Silver maple Bur oak Common hackberry Eastern cotton-wood
McPaul sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood	68* 90	Black walnut Silver maple Green ash Common hackberry
Modale vfs1, sil	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Green ash	90	Black walnut Silver maple Green ash Common hackberry Eastern cotton-wood
Monona sil 17-30% N&E slopes	3r	Moderate	Moderate	Slight	Slight	Moderate	Black walnut Northern red oak Green ash Common hackberry American basswood	65 60 56 58	Black walnut Northern red oak Green ash Common hackberry American bass-wood
Nora sil 17-31% N&E slopes	1r	Severe	Moderate	Slight	Slight	Slight	Bur oak	45*	Bur oak Northern red oak American bass-wood Common hackberry
Omadi sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood	75 70	Black walnut Silver maple Green ash Common hackberry

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Onawa sic	5c	Slight	Severe	Severe	Moderate	Severe	Eastern cotton wood Green ash	90*	Eastern cotton-wood Silver maple
Ord loam fsl	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	80*	Eastern cotton-wood
Ovina lfs, fsl	4o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood	76*	Eastern cotton-wood
Owego sic	4w	Slight	Severe	Severe	Moderate	Severe	Eastern cotton wood Green ash Silver maple	80	Eastern cotton-wood Silver maple
Percival sic	3c	Slight	Moderate	Severe	Slight	Moderate	Eastern cotton wood	70	Eastern cotton-wood
Platte fsl, loam	2w	Slight	Severe	Moderate	Moderate	Moderate	Eastern cotton wood Green ash	65	Eastern cotton-wood
Rough Broken Land, Loess		<p>This land type consists of canyons and deeply entrenched drainageways with very steep to near vertical side slopes. Catsteps on the slopes and eroding channels are common. The soil material is pale brown or reddish brown silty loess that is calcareous. Soils of the Coly and Uly series occur on side slopes.</p> <p>These are generally good sites for ponderosa pine, Austrian pine, or Scotch pine on the steep north and east slopes. The bottoms are usually good sites for black walnut, common hackberry, bur oak, and green ash.</p>							
Roxbury sil	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cotton wood Bur oak	62* 85*	Black walnut Bur oak Common hackberry Silver maple Eastern cotton-wood
Rusco sil	3o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Bur oak Eastern cotton wood	65*	Black walnut Silver maple Common hackberry Bur oak
Sarpy	2s	Slight	Slight	Severe	Slight	Slight	Eastern cotton wood	60	Eastern cotton-wood
Silty Alluvial Land		<p>This land type consists of frequently flooded areas along stream channels that are deeply entrenched in places. In many areas about one-half of this unit consists of deeply cut creek channels and the adjoining streambanks and breaks. The soil material is dominantly stratified silt loam or light silty clay loam (usually Hobbs-like soils).</p> <p>These are usually good soils for black walnut, silver maple, common hackberry, green ash, and eastern cottonwood growth. However, site quality may be variable from fair to excellent within short distances.</p>							

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA Vegetative Zone III

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Silver Creek sil sicl	4c	Slight	Slight	Severe	Severe	Moderate	Eastern cotton wood Green ash	85*	Eastern cotton-wood Silver maple Green ash
Duda Ronson Tassel 15-70% N&E slopes									
-Duda part	3r	15-35% - Moderate 35%+ - Severe	15-35% - Moderate 35%+ - Severe	Slight	Slight	Slight	Ponderosa pine	65	Ponderosa pine
-Ronson part	3r	15-35% - Moderate 35%+ - Severe	15-35% - Moderate 35%+ - Severe	Slight	Slight	Slight	Ponderosa pine	65	Ponderosa pine
-Tassel part	2d	Severe	15-35% - Moderate 35%+ - Severe	Moderate	Moderate	Slight	Ponderosa pine	55	Ponderosa pine
Volin sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hack- berry Eastern cot- ton wood	75* 69* 90*	Black walnut Silver maple Green ash Eastern cotton- wood
Wann fsl, sil loam	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cot- ton wood	86*	Eastern cotton- wood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONE IV

Only the soils suitable for production of commercial trees are listed in this guide. Absence of an entry in a column means the information was not available. *Those entries marked with an asterisk are estimates.

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Albaton sic, sil, sicl	4w	Slight	Severe	Sil - Slight Sicl - Moderate Sic - Severe	Moderate	Severe	Eastern cotton wood Green ash Silver maple	85*	Eastern cotton-wood Silver maple Green ash
Alda l, fsl, vsl	4o	Slight	Slight	Slight	Slight	Slight	Eastern cotton wood Green ash	80*	Eastern cotton-wood Green ash
Alluvial Land	<p>This land type is along drainageways in nearly level areas that are subject to frequent flooding. The area includes the meandering stream channel in the upland drains while those areas along the Missouri River are usually adjacent to the river. Soils on the upland drains are mostly stratified silt loams and silty clay loams (Nodaway-like and Hobbs-like soils) while areas along the Missouri River are mostly stratified fine sands with a water table at 1 to 3 feet.</p> <p>These are usually good soils for black walnut, silver maple, green ash, and common hackberry on silty areas and eastern cottonwood on sandy areas. However, site quality may be variable from <u>fair</u> to <u>excellent</u> within short distances.</p>								
Belfore sic, 0-2%	4o	Slight	Slight	Moderate	Slight	Moderate	Black walnut Green ash Common hackberry	69* 62	Black walnut Northern red oak Green ash Common hackberry American bass-wood
Blake sicl	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cotton wood Black walnut Silver maple Green ash	90* 68*	Black walnut Silver maple Green ash Common hackberry Eastern cotton-wood
Blencoe sic	4c	Slight	Severe	Severe	Moderate	Moderate	Eastern cotton wood Green ash	85*	Eastern cotton-wood Silver maple
Blyburg sil, sicl	4o	Slight	Sil, sicl Slight	Sil - Slight Sicl - Slight	Slight	Slight	Eastern cotton wood Green ash Black walnut	85 65	Black walnut Green ash Silver maple Common hackberry Eastern cotton-wood
Boel l, fsl, ifs 0-2%	4o 4s	Slight Slight	Slight Slight	Slight Moderate	Slight Slight	Slight Slight	Eastern cotton wood Green ash	80*	Eastern cottonwood Silver maple Green ash
Breaks Alluvial Land	<p>This land type consists of steep and very steep breaks and of narrow, nearly level areas of alluvial land along drainageways of the uplands. Soils on the narrow alluvial lands are stratified silt loams and silty clay loams (usually Hobbs-like and Nodaway-like). A small stream channel is usually entrenched in the alluvial land part. The side slopes along the breaks are usually silty or loam, depending on the kinds of adjacent soils (usually Marshall-like, Sharpsburg-like, Burchard-like, Steinauer-like, or Geary-like soils). The breaks have a very high erosion potential while the alluvial land is subject to frequent flooding.</p>								

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES IV

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
<p>These are usually good soils for black walnuts, silver maple, green ash, and common hackberry on the alluvial part and black walnut, northern red oak, bur oak, and common hackberry on the breaks part. However, site quality may be variable from <u>fair</u> to <u>excellent</u> within short distances.</p>									
Burchard cl 12-17% N&E slopes	2o	Moderate	Moderate	Slight	Slight	Slight	Bur oak Shagbark hickory Common hackberry Black walnut	55* 70* 65* 56*	Bur oak Shagbark hickory Common hackberry Black walnut
<15%	4o	Slight	Slight	Slight	Slight	Slight			
Butler sil, scl	3c	Slight	Slight	Severe	Severe	Slight	Eastern cottonwood	70*	Eastern cottonwood Green ash
Calco sil, scl	5w	Slight	Severe	Moderate	Moderate	Severe	Eastern cottonwood Green ash Silver maple	90*	Eastern cottonwood Green ash Silver maple
Carr fs1	5o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood Black walnut Common hackberry Green ash	90 70* 68* 69*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Cass loam, vfl	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood Black walnut Green ash Common hackberry	90* 70*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Clamo sil	4w	Slight	Severe	Moderate	Moderate	Severe	Eastern cottonwood	80*	Eastern cottonwood
Colo sil	5w	Slight	Severe	Moderate	Moderate	Severe	Eastern cottonwood Black walnut Common hackberry Bur oak Bitternut hickory	90* 68 75 56 64	Silver maple Black walnut Common hackberry Green ash Eastern cottonwood
Cozad sil 0-1%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	71*	Black walnut Silver maple Green ash Common hackberry
Crofton sil 15-30, 30-60% N&E slopes	1r	15-30% Moderate 30-60% Severe	15-30% Moderate 30-60% Severe	Slight	Slight	Moderate	Bur oak	40	Bur oak Northern red oak American basswood Common hackberry

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES IV

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Eudora sil	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood Black walnut Common hackberry Green ash	90 70 68 69	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Fillmore	2w	Slight	Severe	Moderate	Moderate	Severe	Eastern cottonwood	65*	Eastern cottonwood
Forney sil, sec	4w	Slight	Severe	Severe	Moderate	Severe	Eastern cottonwood	80*	Eastern cottonwood
Geary sil, sil 11-30% N&E slopes	3r	Moderate	Moderate	Slight	Slight	Moderate	Black walnut Green ash Common hackberry American basswood	65* 72 65	Black walnut Northern red oak Common hackberry Green ash
Gibbon sil, ls, sil	5o	Slight	Slight	Moderate	Moderate	Slight	Eastern cottonwood Black walnut Common hackberry	90* 68 75	Eastern cottonwood Silver maple Green ash
Grable vfs1 0-2%	5o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood Black walnut Common hackberry Green ash	90* 70* 68* 69*	Black walnut Silver maple Green ash Eastern cottonwood
Gullied Land	<p>This land type consists of areas along drainageways that have been deeply cut by gully erosion. The areas are long and narrow. The soil material is mainly silt loam (usually Ida-like or Crofton-like soils). Uncontrolled, degrading and sloughing of side banks can cause gullies that range from 6 to 40 feet in depth. In upland areas, drainageways have been cut by erosion during periods of high rainfall and excessive runoff.</p> <p>These are usually fair soils for bur oak, northern red oak, and American basswood. However, site quality may vary from <u>fair</u> to <u>poor</u> within short distances.</p>								
Hall sil 0-3%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	75*	Black walnut Silver maple Common hackberry Green ash
Haynie sil	6o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood Silver maple Black walnut Green ash Common hackberry	100* 71	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES IV

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Hobbs sil 0-1% 1-3%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood	75*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Hord sil, terrace	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood	68*	Black walnut Silver maple Common hackberry Green ash Bur oak
Ida sil 17-30% 30-60% N&E slopes	1r	17-30% Moderate 30-60% Severe	17-30% Moderate 30-60% Severe	Slight	Slight	Slight	Bur oak Northern red oak American basswood Green ash Common hackberry	45	Bur oak Northern red oak American basswood Common hackberry Green ash
Inavale lfs, fs1	3s	Slight	Slight	Moderate	Slight	Moderate	Eastern cottonwood	70	Eastern cottonwood
Janude loam	5o	Slight	Slight	Slight	Slight	Moderate	Eastern cottonwood Black walnut Green ash Common hackberry	90* 71*	Black walnut Green ash Common hackberry Eastern cottonwood
Judson sil, sic1 0-7%	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Northern red oak Common hackberry American basswood Eastern cottonwood	70 71	Black walnut Northern red oak Green ash Common hackberry American basswood Silver maple Eastern cottonwood
Kennebec sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	75 71 90*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Kipson sil 7-30% N&E slopes	3r	Moderate	Severe	S&W Aspect Moderate N&E Aspect Slight	Moderate	Moderate	Bur oak Common hackberry Shagbark hickory	56 60 60	Bur oak Common hackberry

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES IV

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Lamo sil	4o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood Green ash	85*	Eastern cottonwood Green ash Silver maple
Lamoure	4o	Slight	Slight	Moderate	Slight	Slight	Eastern cottonwood Green ash	85*	Eastern cottonwood Silver maple Green ash
Leshara sil	5o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood Green ash	86*	Eastern cottonwood Green ash Silver maple
Lex sil	4o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood	80*	Eastern cottonwood
Luton sil, sil	4w	Slight	Severe	Severe	Severe	Severe	Eastern cottonwood Green ash	85	Eastern cottonwood
Marshall sil, 7-11% 11-17%	3o	<15% Slight >15% Moderate	<15% Slight >15% Moderate	Slight	Slight	Moderate	Black walnut Northern red oak Black cherry American basswood Common hackberry	65* 60* 50 58* 56*	Black walnut Northern red oak Green ash Common hackberry Black cherry
McPaul sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	71* 90	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood
Modale sil, vfs	4o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood Silver maple Black walnut Green ash	85*	Silver maple Green ash Eastern cottonwood
Monona sil 11-17%	3o	7-11% Slight 11-17% Moderate	7-11% Slight 11-17% Moderate	11-30% Slight N&E slopes-Slight 17-30% S&W slopes-Moderate	Slight	Moderate	Black walnut Northern red oak Green ash Common hackberry American basswood	65 60 56 58	Black walnut Northern red oak Green ash Common hackberry Black cherry
17-30%	3r	17-30% Severe							
Muir sil, sil	4o	Slight	Slight	Moderate	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	71	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES IV

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity			Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index		
Nodaway sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	75 70 95*	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood	
Nora sil, 17-31% N&E slopes	1r	Severe	Moderate	Slight	Slight	Slight	Bur oak	45*	Bur oak Northern red oak American basswood Common hackberry	
Omadi sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Common hackberry Eastern cottonwood	75 70	Black walnut Silver maple Green ash Common hackberry Eastern cottonwood	
Onawa c, sic	5c	Slight	Severe	Severe	Moderate	Severe	Eastern cottonwood Green ash Common hackberry	90*	Eastern cottonwood Silver maple	
Owego sic	4c	Slight	Severe	Severe	Moderate	Severe	Eastern cottonwood	80*	Eastern cottonwood	
Percival sic	3c	Slight	Moderate	Severe	Slight	Slight	Eastern cottonwood	70	Eastern cottonwood	
Platte loam	3w	Slight	Severe	Moderate	Moderate	Moderate	Eastern cottonwood Green ash	70	Eastern cottonwood	
Rough Broken Land	<p>This land type consists of very steep to nearly vertical areas of Peoria Loess that contain large gullies, deeply entrenched drainageways, and overfalls. The soil material is mostly silt loam (usually Ida-like or Crofton-like soils). Water erosion is the main hazard. Runoff is very rapid. Soil slipping, which is common in steeper areas, form short vertical steps, commonly called catsteps.</p> <p>These are usually fair soils for bur oak, northern red oak, and American basswood. However, site quality may vary from <u>fair</u> to <u>poor</u> within short distances.</p>									
Salix sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut Green ash Eastern cottonwood	75* 69* 90*	Black walnut Silver maple Green ash Eastern cottonwood	
Sandy Alluvial Land	<p>This land type consists of recent flood deposition adjacent to channels of rivers and streams. The soil material is stratified sands with thin layers of silty or loamy material. In some areas the underlying material is coarse sand and gravel (usually Platte-like or Sarpy-like soils). These areas are subject to frequent flooding. They are commonly dissected by numerous abandoned channels, and during highest streamflow, these channels are filled with water.</p> <p>These are usually good soils for eastern cottonwood growth. However, site quality may be variable from <u>good</u> to <u>poor</u> within short distances.</p>									

GUIDE TO SUITABLE SOILS FOR WOOD CROPS IN NEBRASKA VEGETATIVE ZONES IV

Name of Soil or Land Type	Ordination Symbol	Management Concerns					Potential Productivity		Trees to Plant
		Erosion Hazard	Equipment Limitation	Seedling Mortality	Wind-throw Hazard	Plant Competition	Common Trees	Site Index	
Sarpy fs, lfs	2s	Slight	Slight	Severe	Slight	Slight	Eastern cottonwood	60	Eastern cottonwood
Sharpsburg sicl	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut	70	Black walnut
							Green ash		Northern red oak
							Common hackberry	72	Green ash
							Bur oak		Common hackberry
Shelby cl, 12-18% N&E slopes	2r	Moderate	Moderate	Moderate	Slight	Slight	Northern red oak	46	Northern red oak
							American basswood	48	Common hackberry
							Common hackberry		American basswood
							Bur oak	47	
Silty Alluvial Land		<p>This land type consists of frequently flooded areas along stream channels that are deeply entrenched in places. In many areas about one-half of this unit consists of deeply cut creek channels and the adjoining streambanks and breaks. The soil material is dominantly stratified silt loam or light silty clay loam (usually Nodaway-like or Hobbs-like soils).</p> <p>These are usually good soils for black walnut, silver maple, common hackberry, green ash, and eastern cottonwood growth. However, site quality may be variable from <u>fair</u> to <u>excellent</u> within short distances.</p>							
Vollin sil	4o	Slight	Slight	Slight	Slight	Moderate	Black walnut	75*	Black walnut
							Green ash	69*	Silver maple
							Eastern cottonwood	90*	Green ash
									Eastern cottonwood
Wabash sic, sicl	4w	Slight	Severe	Severe	Severe	Severe	Eastern cottonwood	80	Eastern cottonwood
Wann fsl, loam	5o	Slight	Slight	Slight	Slight	Slight	Eastern cottonwood	90*	Eastern cottonwood
Zook sil, sic, sicl	4w	Slight	Severe	Severe	Moderate	Severe	Eastern cottonwood	80	Eastern cottonwood

