



New Species for North Dakota Windbreaks

Project Overview - November 2020



Windbreaks are an essential part of North Dakota's unique landscape. These tree plantings are carefully designed to achieve conservation, economic and societal goals. They are an important component of many agricultural systems and can improve rural life in the northern Plains. Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance after planting. Many favorite windbreak species are not indigenous to the areas in which they are planted. Some are not native to North America. Each year millions of dollars are invested in windbreaks; careful review of species performance in trials prior to recommending them to landowners assures adequate windbreak performance to meet landowner expectations.

This project will expand the choices of species deemed suitable for planting in windbreaks in North Dakota.

Project Activities

- Systematic review of species performance trials undertaken in North Dakota, 1960's to present.
 - Assess individual species performance under specified conditions of soil, climate, and physiography.
- Propagate and distribute seedlings to be utilized in replicated trial plantings on sites throughout the state.
 - Seed source provenance will be maintained throughout.
- Encourage landowner participation through financial incentives.
- Identify local seed sources or establish new seed orchards as necessary where local seed sources are not available, to ensure these new species are available to future generations of North Dakotans.
- Assist Natural Resource Conservation Service (NRCS) in identifying new species suited to North Dakota and determination of appropriate Conservation Tree and Shrub Group (CTSG) recommendations for inclusion in the NRCS Field Office Technical Guide (FOTG).

This project address the following Strategies identified in the 2020 North Dakota Forest Action Plan:

Strategy 2.2a: Identify seed sources and species adapted to biotic and abiotic conditions of the state.

Strategy 2.2d: Promote tree species diversity and forest health practices in windbreak and conservation tree plantings.

Strategy 3.2b: Reduce forest conversion.

Strategy 3.2c: Plant new trees to increase carbon sequestration.

For more information please contact:

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Species of Interest – Updated February 2021

West CTSG Approved	*Review	1	1K	1K K	1S	2	2k	2k k	2H	3	4,4 c,4 ck	5,5 k	6 all	7	8k	9, 9N	9 W/ 10
Black Chokeberry Review west sites having same soils as approved east CTSG's, SD similar sites		*			*	*				*		*	*				
American Linden Review west sites having same soils as approved east CTSG's		*			*	*				*							
Common Hackberry Review all sites currently approved for green ash.				*				*				*	*		*	*	
Bur Oak Review all sites currently approved for green ash.				*		*	*	*					*		*	*	
Ussurian Pear (Harbin) Review additional sites within certain parameters.													*	*			
Black Walnut Review west sites having same soils as approved east CTSG's		*	*	*	*					*							
Scotch Pine Review all sites currently approved for ponderosa pine.				*										*	*	*	
Arnold Hawthorn Review additional sites within certain parameters.				*		*	*	*									
Honeylocust Approved for similar sites in SD; additional sites within parameters		*	*	*	*	*				*		*					
Littleleaf Linden Approved for similar sites in SD; additional sites within parameters		*	*	*	*	*				*		*					
Kentucky Coffee Tree Approved for similar sites in SD		*								*							
Meyer Spruce Review all sites currently approved for Colorado blue spruce		*	*			*	*			*	*						
Norway Spruce Review all sites currently approved for Colorado blue spruce		*	*			*	*			*	*						
Lodge pole Pine Review all sites currently approved for ponderosa pine.		*	*	*	*					*		*	*	*	*	*	
Jack Pine Review all sites currently approved for ponderosa pine.		*	*	*	*					*		*	*	*	*	*	
Douglas Fir Review sites within certain parameters.		*			*					*		*					
Japanese Elm Review sites within certain parameters.		*	*		*	*				*		*					

This list indicates the species of interest for Phase 1 review, with evaluations beginning 2021. Plantings installed prior to 2010 or ad-hoc sites with an estimated planting date prior to 2010, on sites indicated with an "*" are prioritized for review. For more information or to suggest a site for evaluation, please contact: Liz Smith, Forest Stewardship Program Manager, NDSU - North Dakota Forest Service, phone: 701.537.3584 e-mail: liz.smith@ndsu.edu