

# RECLAMATION GRASS SELECTION DEPENDS ON COMBINATIONS, COST

The key to success in establishing grass cover in land reclamation is utilizing a mixture of hardy species according to research recently completed in a cooperative project between Lofts Pedigreed Seed Co. of Bound Brook, NJ, and Jacklin Seed Co., of Post Falls, ID.

The project, directed by Lofts Director of Research Richard Hurley, studied nearly 75 different species of grasses and legumes in order to select four mixtures for reclamation.

"Our research uncovered many desirable species which should be utilized in some reclamation situations, but because of limited or no commercially available seed sources, they were omitted from our final mixtures," Hurley said. "Although these species can be purchased, they are not widely utilized in reclamation mixtures because of high seed cost and/or difficulty in providing plant establishment.

"Specially developed mixtures may be required for some areas of the U.S., especially the arid Midwest, West and portions of the Rocky Mountains, where varying elevations and slopes create thousands of small microclimates. Items in a seed mixture which should be considered are seed size or number of seeds per pound, seedling vigor and rate of establishment. Percent of seed included in a mixture may be misleading," Hurley warns.

When seeding any of the species available, they should not be seeded alone. As a general guideline, a minimum of three species should be included in any seed mixture."

As a result of this research, Lofts and Jacklin are now marketing four mixtures for reclamation under the name Pinto.

Below is a master list containing most of the desirable species of grasses and legumes used on reclamation and revegetation sites across the United States. When seeding any of these species, they should not be seeded alone. As a general

## Dry Acid Mixture

Tall Fescue  
"Oahe" Intermediate Wheatgrass  
Sheep Fescue  
"Reubens" Canada Bluegrass  
"Troy" Kentucky Bluegrass

## Moist Acid Mixture

Tall Fescue  
"Lynn" Perennial Ryegrass  
"Reubens" Canada Bluegrass  
"Troy" Kentucky Bluegrass  
"Sabre" Poa trivialis  
White Clover  
Alsike Clover

## Dry Alkaline Mixture

Tall Fescue  
Russian Wild Ryegrass  
Crested Wheatgrass  
Sheep Fescue  
"Lynn" Perennial Ryegrass  
"Lemmons" Alkali Grass

## Moist Alkaline Mixture

Tall Fescue  
Slender Wheatgrass  
"Lynn" Perennial Ryegrass  
"Lemmons" Alkali Grass  
"Sabre" Poa trivialis

guideline, a minimum of three species should be included in any seed mixture for revegetation purposes. "Many species which we would like to utilize from a standpoint of performance, are either too expensive on a cost per acre basis for most general recommendation situations, or are presently not in commercial production," says Hurley.

Species	Scientific Name	Variety	East to Midwest States	Midwest to Western States	Species Availability
Drought Tolerant Bunchgrass					
Beardless Wheatgrass	Agropyron inerme	"Whitmar"		X	*A
Big Bluegrass	Poa ampla	"Sherman"		X	A
Bluebunch Wheatgrass	Agropyron spicatum		X	X	L
Hard Fescue	Festuca ovina, var. duriuscula	"Durar"	X	X	A
Indian Ricegrass	Oryzopsis hymenoides			X	L
Needle and Thread	Stipa comata			X	L
Russian Wildrye	Elymus junceus	"Sawki"		X	A
Sand Dropseed	Sporobolus cryptandrus		X	X	L
Siberian Wheatgrass	Agropyron sibiricum			X	A
Slender Wheatgrass	Agropyron trachycaulum		X	X	A
Weeping Lovegrass	Eragrostis curvula		X (W)	X	A
Sheep Fescue	Festuca ovina		X	X	A

### Drought Tolerant Sod Forming Grasses

Canada Bluegrass	<i>Poa Compressa</i>	"Rubens"	X	X	A
Tall Fescue	<i>Festuca arundinacea</i>		X		A
Creeping Red Fescue	<i>Festuca rubra</i>			X	A
Pubescent Wheatgrass	<i>Agropyron trichophorum</i>	"Greenleaf" or "Topar"	X	X	A
Streambank Wheatgrass	<i>Agropyron riparium</i>	"Sodar"		X	A
Intermediate Wheatgrass	<i>Agropyron intermedium</i>	"Oahe"		X	A
Thickpike Wheatgrass	<i>Agropyron dasystachyum</i>			X	L
Western Wheatgrass	<i>Agropyron smithii</i>		X	X	A
Bermudagrass	<i>Cynodon dactylon</i>		X (W)	X	A
Timothy	<i>Phleum pratense</i>		X	X	A
Kentucky Bluegrass	<i>Poa pratensis</i>		X	X	A

### Sand Stabilizing Plants

Prairie Sandreed	<i>Calamovilfa longifolia</i>			X	L
Switchgrass	<i>Panicum virgatum</i>		X	X	A
Sand Bluestem	<i>Andropogon hallii</i>			X	L
Indian Ricegrass	<i>Oryzopsis hymenoides</i>			X	L
Needle & Thread	<i>Stipa comata</i>			X	L
Sand Lovegrass	<i>Eragrostis trichodes</i>			X	A
Beachgrass	<i>Ammophila spp.</i>		X		NA
Blowout grass	<i>Redfieldia flexuosa</i>		(W)	X	L
Sandhill Muhly	<i>Muhlenbergia pungens</i>		(W)	X	L

### Acid Tolerant Grasses

Canada Bluegrass	<i>Poa Compressa</i>	"Rubens"	X	X	A
Perennial Ryegrass	<i>Lolium perenne</i>		X	X	A
Colonial Bentgrass	<i>Agrostis tenuis</i>	"Highland"	X	X	A
Creeping Bentgrass	<i>Agrostis palustris</i>		X	X	A
Creeping Foxtail	<i>Alopecurus arundinaceus</i>	"Garrison"	X	X	A
Deer Tongue Grass	<i>Panicum clandestinum</i>	"Tioga"	X		L
Hard Fescue	<i>Festuca ovina, var. duriuscula</i>	"Durar"	X	X	A
Bermudagrass	<i>Cynodon dactylon</i>		X (W)	X	A
Meadow Foxtail	<i>Alopecurus pratensis</i>		X	X	A
Red Fescue	<i>Festuca rubra</i>		X	X	A
Redtop	<i>Agrostis alba</i>		X	X	A
Switchgrass	<i>Panicum virgatum</i>		X (W)	X	A
Weeping Lovegrass	<i>Eragrostis curvula</i>		X (W)	X	A

### Alkaline Tolerant Grasses

Alkali Sacaton	<i>Sporobolus airoides</i>			X	A
Bermudagrass	<i>Cynodon dactylon</i>		X (W)	X	A
Foxtail Barley	<i>Hordeum jubatum</i>		X	X	A
Perennial Ryegrass	<i>Lolium perenne</i>		X	X	A
Streambank Wheatgrass	<i>Agropyron riparium</i>	"Sodar"	X	X	A
Tall Wheatgrass	<i>Agropyron elongatum</i>	"Alkar"	X	X	A
Western Wheatgrass	<i>Agropyron smithii</i>		X	X	A
Alkali Cordgrass	<i>Spartina gracilis</i>			X	NA
Basin Wildrye	<i>Elymus Cinereus</i>			X	NA
Canada Wildrye	<i>Elymus canadensis</i>		X	X	NA
Saltgrass	<i>Distichlis stricta</i>		(W)	X	NA
Russian Wildrye	<i>Elymus junceus</i>	"Sawki"		X	A
Crested Wheatgrass	<i>Agropyron desertorum</i>			X	A
Alkali Grass	<i>Puccinellia lemmoni</i>	"Lemmons"		X	A
Slender Wheatgrass	<i>Agropyron trachycaulum</i>				

### Grasses & Legumes Tolerant of Moist Soils

Alsike Clover	<i>Trifolium hybridum</i>		X	X	A
Alkali Cordgrass	<i>Spartina gracilis</i>			X	A
Reed Canarygrass	<i>Phalaris arundinacea</i>		X	X	A
Colonial Bentgrass	<i>Agrostis tenuis</i>	"Highland"	X	X	A
Creeping Bentgrass	<i>Agrostis palustris</i>		X	X	A
Poa trivialis	<i>Poa trivialis</i>	"Sabre"	X		A
Creeping Foxtail	<i>Alopecurus arundinaceus</i>	"Garrison"	X	X	A
Meadow Foxtail	<i>Alopecurus pratensis</i>		X	X	A
Perennial Ryegrass	<i>Lolium perenne</i>		X	X	A

### Legumes

Crown Vetch	<i>Coronilla varia</i>	"Penngift"	X	X	A
Birdfoot Treefoil	<i>Lotus corniculatus</i>	"Empire"	X	X	A
Sericea Lespedeza	<i>Lespedeza cuneata</i>		X	X	A
White Clover	<i>Trifolium repens</i>		X	X	A
Alsike Clover	<i>Trifolium hybridum</i>				

A — commercially available  
L — limited availability  
NA — not commercially available

W — warm season grass best adapted to the southern states or similar climate