

Seeding Depth is Critical

One of the major reasons for failed or poorly established seedings is planting the seed too deep. Optimum depth for larger seed is ½ to 1 inch and ½ inch or less for smaller seed. Information compiled from many years ago shows the average percent emergence on loam soil.

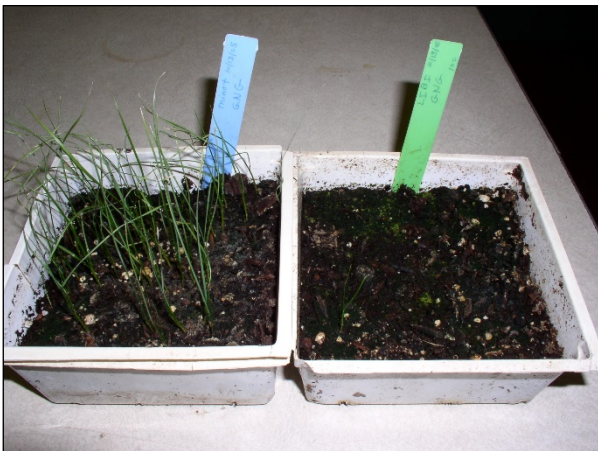
A chart such as this may be good to give to landowners prior to seeding grass. Remember, a **firm seedbed** is essential for depth control. If depth bands are not available on the drill, adjust the disk openers so the pressure is released and seed placement is near the soil surface. Grain drills, if improperly adjusted, will plant the seed 2 to 3 inches deep even on a firm seedbed!

The Virtues of Varieties

A common misconception is that varieties of native grasses do not perform as well as sources from local populations and they will not persist in plantings. The fact is, adapted

varieties (cultivars) generally perform better and persist as long or longer than local sources. Most native grass varieties originated from local populations. When developing the variety, plants were selected for specific traits such as ease of establishment, seedling vigor, disease resistance, biomass/forage production, and seed production. These traits are important in conservation plantings and

greatly increase the probability of quicker establishment, less invasive weeds, and overall long-term success of the planting. Why is this? A variety must go through extensive field testing and have performance documented prior to being formally released. If you look at it from an agronomic perspective, it makes good sense to plant seed that has known traits and performance. This information can help you decide which varieties will best meet your conservation needs. For example, how important is it that herbaceous wildlife plantings remain upright in the winter and don't lay flat (lodge) on the ground? Wildlife survival may depend on this one selected trait. What about planting a native forb of southern origin in a pollinator planting in the Northern Great Plains? Often, southern origin material will not mature enough to flower before a killing frost. Therefore, the plant material will not provide the pollinator benefits desired from the planting. Each state has a section in their FOTG listing best adapted, recommended varieties or seed origins. Proven performance is a key advantage in using adapted varieties of native species in conservation plantings.



The variety 'Lordorm' green needlegrass (left) selected for its low seed dormancy, is compared to a native harvest (right) 20 days after seeding.

Average Percent Emergence on Loam Soil *							
Species	Depth of Planting (inches)						Optimum Depth
	½	1	1 ½	2	2 ½	3	
	-----% Emergence-----						
bromegrass	94	94	83	62	40	8	½- 1
intermediate wheatgrass	92	98	90	77	38	6	½- 1
tall wheatgrass	93	90	83	61	27	3	½- 1
reed canarygrass	76	73	67	54	37	9	½- 1
crested wheatgrass	87	79	44	6	0	0	½- 1
western wheatgrass	71	72	54	0	0	0	½- 1
switchgrass	75	65	45	0	0	0	½- 1
big bluestem	65	59	38	0	0	0	½- 1
sideoats grama	62	39	0	0	0	0	½
blue grama	61	33	0	0	0	0	½
alfalfa	74	40	no data	7	no data	0	½
sweet clover	62	30	no data	4	no data	1	½

* from same number of viable seeds.
Note: Data on introduced grasses from Canada, *Scientific Ag.*, 26:9 September 1946. Data on native grasses from SCS Nursery, Mandan, ND, June 1949. Data on legumes from University of Minnesota reproduced in the *Journal of American Society of Agronomy*