

Pure Live Seed

Native grasses, wildflowers and wetland seed need special consideration when formulating mixtures and writing seed specifications. The most important consideration is **pure live seed (PLS)**, for it essentially creates a platform of uniformity for a group of species that often differs greatly in purity and germination all the seed lots. Unlike turfgrasses which have a fairly uniform shape and bulk density, as well as being easier to clean and process, native grasses, wildflowers and wetland species need extra steps to clean and process. Many species are light, fluffy and have very irregular shapes that make it harder to clean (separate the seed from all the other stuff). That is why basing seeding specifications and formulations on PLS is important.. Determining formulations using PLS rates creates a level playing field among all the different seed lots that exist in the market. One seed company may have a cleaner lot of Little Bluestem than another, so when the seed mixture is specified as PLS, the quality is ensured because specifying PLS creates a level platform for quality.

So how do we determine PLS? Pure Live Seed is calculated by multiplying the **purity** of a specific seed lot times the **germination** of the seed in that lot. Another way of looking at PLS is taking one bulk pound of Little Bluestem, hypothetically figuring the PLS percent as 85%, this would tell us that 0.85 pounds of seed within that one bulk pound was PURE LIVE SEED, or viable seed. So no matter what the purity and germination of any lot of Little Bluestem was, specifying one PLS LB of seed needed per acre, you would need 1.18 bulk (1 / .85 = 1.18) pounds of seed to make up the one PLS LB of Little Bluestem. If the PLS was 91%, then we would need 1.1 (1 / .91) bulk pounds of seed to get 1 PLS LB of seed. Calculating on the basis of PLS, makes determining the bulk amt. relative to the amount of PLS needed.

Blaze Little Bluestem			
Lot Code: CCS-12	Test Date: 12/19/2012		
Purity: 60.26%	Germ 95.00%	Origin: NE	
Other Crop: 2.35%	Dorm 0.00%	Unit Wt: 1.0 LBS	
Inert: 37.38%	TtlGerm 95.00%	PLS Lbs.: 0.57	
Weed: 0.01%	Pure Live Seed: 57.25%	PLS Factor: 1.747	
Noxious: none in excess			

From the lot tag example above, we can see that the purity is 60.26% and the germination is 95.00%, which when calculated, gives us a PLS of 57.25%. Assuming we have one bulk pound of Little Bluestem, we can further determine that there is 0.57 pounds of pure live seed within that bulk pound of Little Bluestem. If we needed one PLS of Little Bluestem, we would need 1.75 bulk pounds to get one PLS LB of Little Bluestem.

There are however, some native grasses that have consistent uniformity and bulk density and native grasses like **Switchgrass (to the right), Sand Dropseed, Sand Lovegrass and Prairie Dropseed** although very small, can be cleaned using special screens to separate the good seed from the weed seeds, chaff, inert and other crop matter.

