

# A Guide to Understanding Seed Tags

# Fact Sheet

Understanding the components of a seed tag is important when purchasing seed for conservation plantings. Seed tags provide the information needed to verify the quality and amount of seed in the lot.

## Components of the Seed Tag:

**Name:** The variety and species name. Tags should include the variety name, if known; otherwise VNS (variety not stated).

**Lot Number:** This is a series of letters and/or numbers assigned by the grower for tracking purposes. All seed sold requires a lot number.

**Purity:** Pure seed or purity is the percent of seed of the lot that is the stated species. For example, a purity of 90% tells you that 10% of the bag content is inert matter (chaff), weed seed, or other crop.

**Other Crop:** The percent by weight that is a crop other than the seed species labeled. It does not include weeds. The crop seed must be listed by name if it is more than 5% of the content. This includes annual crops, and grass and forb species that are not the target species.

**Inert:** The percent by weight of chaff, sticks, dirt, and other debris. High inert percentages could affect the seed flow through a drill.

**Weed Seed:** The percentage of common and restricted weed seed in a lot.

**Noxious Weeds:** Each state defines noxious weed species that are restricted or prohibited, as well as the maximum allowable amount of seed of restricted noxious weeds. Restricted noxious weeds must be listed by name, and total seeds per pound identified on the tag. Seed containing prohibited noxious weed seeds cannot be sold and planted in the state where it is listed as prohibited. **Note:** State law regulating noxious weed seeds may be different from law regulating noxious weed plants. To access the noxious weed seed list for each state, search for the USDA AMS home website and then select: Regulatory Programs/Federal Seed Act/Publications/State Noxious-Weed Seed Requirements.

**Germination:** The percentage of seed that germinates in a set period of time under specific lab conditions. It determines the capability of a seed lot to produce normal seedlings under favorable conditions. **Note:** A tetrazolium test (TZ) is a rapid (24-48 hour) chemical viability test that is sometimes used as an estimate of germination; however, it cannot be used as a legal substitute for the germination test on the seed tag.

**Dormant Seed or Hard Seed:** The portion of the seed sample that does not germinate during the time period of the seed test, but is determined to be alive and respiring. Hard seed is a type of dormant seed that has a seed coat impermeable to water.

**Total Viability:** The germination percentage plus the hard/dormant seed percentage. For example, 80% germination and 10% dormant seed equals a total viability of 90%.

**Origin:** The location where seed was grown. For NRCS programs, refer to the respective state NRCS FOTG for accepted areas of origin of non-varietal species and local source native species. There is no restriction on origin of named varieties, but they must be included in the state NRCS FOTG list of accepted named varieties for each species.

**Test Date:** The month and year of the germination test. For use in NRCS programs, the test date for grasses and forbs (excluding the test month) can be no older than 9 months in South Dakota, and 12 months in North Dakota and Minnesota.

Bad River blue grama		Lot SG2-12-E12	
Purity	90.00%	Germ	80%
Crop	3.30%	Dorm Seed	10%
Inert	6.66%	Total Germ	90%
Weed	0.04%	Origin	ND
Noxious Weed	0.00%	Net Weight	40 lbs
		Test Date	12/28/12
XYZ Elevator 123 Harvest Way Bismarck, ND 58502			

**Net Weight:** The bulk weight of the material in the bag.

**Name and Address of Seller:** The name and address of the seller.

### Understanding the Tag of a Seed Mixture

Grasses and wildflowers are frequently sold as mixtures. In addition to the basic label (tag) information, a tag for a seed mixture will include:

- 1) Individual purity and germination (including hard and dormant seed) percentages and origin of each kind of seed occurring in excess of 5% of the total weight.
- 2) Pure seed percentage for each component as a percent of the whole.
- 3) Identification that seed is a mixture.

Native Grass/Legume Mixture		Lot G3L22013				
Kind	Variety	Origin	% Pure Seed	% Germination	% Hard/Dormant	% Total Viability
Big bluestem	Bison	ND	30	70	20	90
Little bluestem	Badlands ecotype	ND	30	65		65
Switchgrass	Forestburg	SD	20	80	10	90
Purple prairieclover	Bismarck germplasm	ND	10	75	20	95
<b>Weed Seed:</b>	0.50%		<b>Other Crop:</b>	5.00%		
<b>Noxious Weed Seed:</b>	None		<b>Inert matter:</b>	4.50%		
<b>Germ Test Date:</b>	March 2013		<b>Net Weight:</b>	<b>50 lbs</b>		
<b>Labeler</b>	XYZ Elevator, 123 Harvest Way, Bismarck, ND 58502					

To calculate the **Pure Live Seed (PLS)** amount of each kind of seed in the mixture:

$$\% \text{ pure seed} / 100 \times \% \text{ total viability} / 100 \times \text{net weight} = \text{PLS amount}$$

(Based on the above tag, the PLS amount of each kind of seed is listed below)

Kind	% Pure Seed	% Total Viability	Net Weight (pounds)	PLS Amount (pounds)
Big bluestem	30	90	50	13.50
Little bluestem	30	65	50	9.75
Switchgrass	20	90	50	9.00
Purple prairieclover	10	95	50	4.75

To determine if all components of the mixture have been accounted for:

$$\% \text{ pure seed of each kind} + \% \text{ weed seed} + \% \text{ other crop} + \% \text{ inert} + \% \text{ noxious weed seed} = 100\%$$

#### Other Considerations:

- Most native plant seed is sold (and should be purchased) on a PLS basis. Germination and purity will always be variable between lots. A bag of seed usually contains non-viable materials like dust, stems, leaves, and empty hulls. Weed and other crop seeds may also be in the bag.
- PLS information allows value comparison of seed lots prior to purchase. When seed is purchased on a PLS basis, the customer pays only for seed that will germinate.
- For NRCS programs, it is the program participant's responsibility to collect and submit all seed tags for actual species seeded in each field.
- Seed coating is considered inert matter which is reflected in the purity and inert percentage on the tag.