



TECHNICAL BULLETIN 90-1

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SUBJECT: Seed Quality and Seed Tag Information for Revegetation Projects

Most state laws require that the following 10 items appear on seed containers:

1. Variety
2. Lot Number
3. Origin (state or county)
4. Weed Seed (must be less than 2%)
5. Noxious Weeds (may prohibit sale)
6. Other Crop Seed
7. Inert Matter
8. Percent Germination
9. Percent purity
10. Name and address of the seed

A working knowledge of these terms is needed for specifying and comparing seed quality of plants for revegetation.

Pure Live Seed (PLS) is used to calculate seeding rates and compare quality and actual cost of seed. PLS is the percent germination multiplied by the percent purity divided by 100.

$$\text{Example: } \frac{90\% \text{ germ} \times 80\% \text{ purity}}{100} = 72\% \text{ PLS}$$

Purity and germination analyses are usually made by a state seed laboratory according to standard seed test procedures. Seed should show a current germination test (within 5 to 12 months). Seed treated with a poisonous material should have a conspicuous warning label.

It is very difficult to obtain an accurate seed analysis after two or more species have been mixed. Components of a mixture can be purchased individually, and seed analysis made or compared before mixing to assure quality standards. Individual species can be purchased and then mixed under the supervision of the consumer or an assigned representative distributor.

Federal and state seed laws require that seed types be represented as components of the mixture, not as separate item on the seed tag.

Example: Seed Tag of a Mixture

<u>Kind</u>	<u>Purity</u>	<u>Germination</u>	<u>Origin</u>
Western Wheatgrass	47.67%	90%	South Dakota
Sideoats Grama	14.25%	86%	Texas
Green Needlegrass	8.28%	74%	Wyoming
Blue Grama	7.66%	89%	New Mexico
Crop Seed	.15%	(total of all items)	
Inert Material	21.62%	(total of all items)	
Weed Seed	.37%	(total of all items)	
	100.00%		

The PLS pounds of each species supplied in a mixture can be calculated by using the seed tag analysis and knowing the total bulk pounds of the see mixture. The total bulk pounds for the above example is 816 pounds.

Example: Calculating Pure live Seed Quantities from the Tag Analysis

<u>Item</u>	<u>Purity in mix</u> x	<u>Germ</u> =	<u>PLS</u> x	<u>Total Lbs.</u> =	<u>PLS Lbs.</u>
Western Wheatgrass	.4767 x	.90 =	.4290 x	816 =	350
Sideoats Grama	.1425 x	.86 =	.1225 x	816 =	100
Green Needlegrass	.0828 x	.74 =	.0613 x	816 =	50
Blue Grama	.0766 x	.80 =	.0613 x	816 =	50

Please contact Wendell Hassell (FTS 327-2172) or (303) 969-2172 of Professional Support Division, Branch of Transportation for more information or assistance regarding seed tag analysis.

/s/ Thomas L. Harrington for Jim J. Straughan

Jim J. Straughan