



JACKLIN[®] S E E D

by **Simplot**

Research Newsletter

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Coated, Hulled, Unhulled...Oh My! What's in Your Bag of Bermudagrass Seed?

A customer recently sent us a picture of a seed label from a popular variety of seeded Bermudagrass. The label stated the following:

Kind: Bermudagrass (Hulled/ Unhulled Coated)	Germination: 85.00%
Pure Seed: 51.88%	Hard seed: 05.00%
Inert Matter:* 48.10%	Total germ: 90.00%

*Inert matter includes 47.79% coating material

VENDORS STATEMENT OF ANALYSIS			
KIND: BERMUDAGRASS (HULLED/UNHULLED COATED)			
VARIETY: _____		LOT NUMBER: _____	
PURE SEED:	51.88%	GERMINATION:	85.00%
INERT MATTER: *	48.10%	HARD SEED:	05.00%
OTHER CROP:	00.01%	TOTAL GERM:	90.00%
WEED SEED:	00.01%	TESTED:	12/10
NOXIOUS:	00.00%	TX# TX-15418, ARK: R-412	
ORIGIN:	OK	NET WEIGHT:	20 LBS
* INERT MATTER INCLUDES 47.79% COATING MATERIAL			
PVP PROTECTED. Unauthorized Propagation Prohibited PVP			

How do you make sense of this seed label? Let's start with some basics about bermudagrass seed.

Hulled or Unhulled

Bermudagrass seed is available either "hulled" or "unhulled." Like many other seeds, bermudagrass seeds develop with a tough outer hull, similar to a sunflower seed, which protects the seed until conditions are ideal for germination. The hull helps the seed survive longer under unfavorable conditions. In a wild and unpredictable environment the hull improves germination, but in a managed turf situation, the hull only succeeds in slowing germination.

Hulled seed has the outer hull removed, while unhulled seed still has the hull on. A hull adds extra bulk to the seed that is not accounted for on the analysis label, but you can assume a bag of unhulled seed has about 40% less seed per pound than a bag of hulled seed.

Coated or Raw

Bermudagrass seed is also sold as "coated" or "raw." Coated seed comes with a clay coating embedded with fungicide and/or nutrients, which adds about 50% to the bulk of the seed. Raw seed has no coating- you are only paying for actual seed.



Hollywood hybrid seeded bermudagrass on a stadium in Monaco

Let's get back to the label. This seed is labeled as "Hulled/Unhulled Coated." What does that mean? According to one seed lab I contacted, the seed could be unhulled, but some hulls were naturally lost in the cleaning process. Thus, the label states "hulled/unhulled," but the percent of each is unknown. This seed is also coated, and you can see the coating listed as inert matter that makes up 47.79% of the bulk in the bag.

Pure Live Seed (PLS)

All of this leads to confusion as a consumer. There are many varieties of seeded bermudagrass available, but they may be packaged and labeled differently, and even the same variety may be sold as unhulled and raw one season, but hulled and coated the next. How do you know how much seed you are paying for, versus inert matter from hulls and coating? The best way to compare costs between different seed products is to compare the amount of pure live seed (PLS) in the bag. The calculation of PLS is:

$$(\% \text{ Pure Seed}) * (\text{Total Germ}) = \text{PLS}$$

For the product above: (51.88 Pure Seed) * (.90 Total Germ) = 46.7% PLS.

According to the label, 46.7% of the weight of the bag is PLS. Another way to look at this is to consider how much product you need to equal 1 lb or kg of seed, and in this case it is 2.14 lbs or kgs of product = 1 lb or kg of PLS. (continued p. 2)

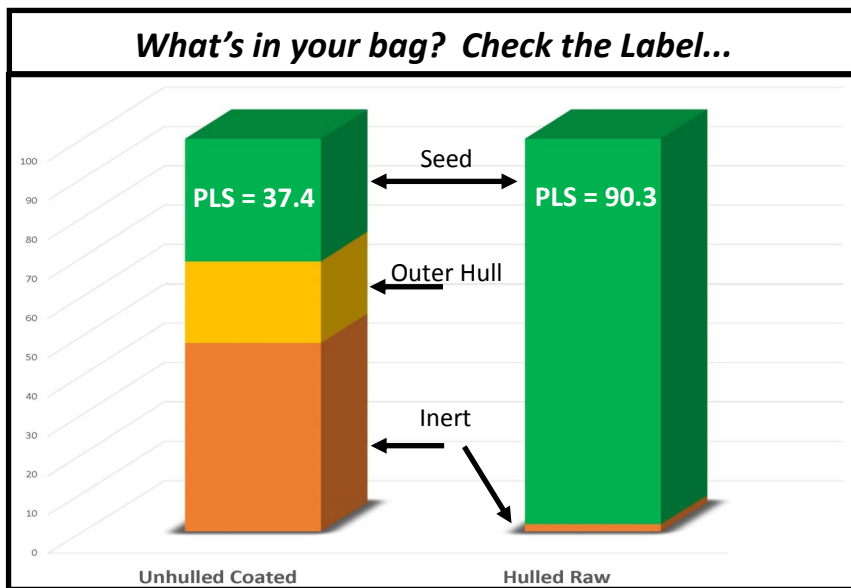
But wait! We haven't considered how much of the bag consists of hulls. Hulls are not accounted for in the inert matter on the analysis label, and technically the hulls are not inert matter. But as a turf manager with a budget, you are wise to consider the bulk added by unnecessary hulls so you can make an educated buying decision. This particular label contains both hulled and unhulled seed, but we don't know the amount of each. For our calculation purposes, let's assume 50/50 hulled/unhulled. Remember, you get approximately 40% less seed if it is unhulled. Applying this assumption to our label, we can calculate:

51.88% Pure Seed minus 20% (for the half of the seed with hulls) = 41.51% actual seed.

Now, plug that into our PLS calculation, and you drop to 37.36% PLS, or 2.67 lbs (kgs) of product = 1 lb (kg) of PLS.

When you buy seed, you pay by the pound no matter how much inert matter is on the analysis label. Jacklin's **Hollywood** bermudagrass is always sold as **hulled** and **raw**. That means a 25 lb bag of Hollywood has about 90% hulled PLS, or 1.11 lbs of Hollywood = 1 lb (kg) of PLS, versus the bermudagrass we calculated above with 2.14 or more lbs (kgs) of product to get you 1 lb (kg) PLS. You get half the seed if the product is hulled and coated. If it is unhulled and coated you get even less seed for your money, as little as 28% PLS, or 3.57 lbs (kgs) of product to equal 1 lb (kg) of PLS.

bermudagrass. Hollywood's leaf texture is similar to Princess, yet it is far more winter hardy. Hollywood retains its rich dark green color well into the fall, and greens up early in the spring.



Hollywood is a Star! NTEP Highlights

In independent National Turf Evaluation Program trials (NTEP) there were 25 seeded bermudagrass entries, including **Hollywood**. Data for Hollywood, compiled from 20 different testing locations across the warmer regions of United States over a four year period, is summarized here:

- Fine leaf texture** – Tied #1*
- Genetic color** – Tied #1*
- Fall color (Sept, Oct, Nov)** – Tied #1*
- Extended winter color** – Tied #1*
- Early spring greenup** – Tied #1*
- Living Ground cover (spring, summer, fall)** – Tied #1*
- Wear tolerant** – Tied #1*
- Frost tolerance & winter kill** – Tied #1*
- Fewest seedheads in the turf** – Tied #1*
- Competing with Poa annua** – Tied #1
- Disease & Pest resistance (dollar spot, damping off, take-all patch, spring dead spot, large patch disease, mole cricket)** – Tied #1*

**Rankings based on statistical values using LSD (least significant difference).*



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Hollywood bermudagrass in the 2007 NTEP at Oklahoma State. Picture taken June, 2014.

Hollywood Bermudagrass

The best deal in the industry for price and performance is Hollywood bermudagrass, which is available to distributors as hulled (no hull) and raw (no coating). This elite variety is highly competitive with Riviera and Princess bermudagrass and can be substituted where you have used them in the past. Hollywood has exceptional winter hardiness for a fine bladed, dwarf (cont.)