

## **THOUGHTS ON FALL PLANTING OF LAWNS -SEED IDENTIFICATION**

With the new seed crops, it's time to look forward to the fall planting season. Make sure you know what you are planting before you waste time and money. I get a surprising number of calls every year from people who thought they were planting one thing and later noticed the new grass looked different than it was supposed to. Generally, I find out no one ever looked at the seed to make sure it was the right mix. Many people are quick to add that they wouldn't know what it was even if they did look at it.

### **Seed Identification**

There are several techniques I use to identify grass seed. First I consider size of the seed. As turfgrass seed goes, tall fescue is largest followed by annual ryegrass, perennial ryegrass, red fescue, chewings fescue, hard fescue, bluegrasses and finally bentgrass. On the basis of size alone, you can tell rather quickly whether your mix is perennial ryegrass and red fescue or Kentucky bluegrass + chewings fescue. The illustration below denotes the relative size differences between grass seeds. After size I look at morphology to help me identify different seeds. In simple terms grass seed is a dried fruit (caryopsis) covered by the lemma and palea (see illustration). Normally when we look at grass seed we see this collective structure. The lemma covers the caryopsis and may have a sword like appendage protruding from the mid-rib. This appendage (called an awn) is often very distinctive.

Grass seed is attached to the inflorescence by a small structure called the rachilla. By learning the general shape of the lemma, the shape and size of the rachilla, and the awn characteristics, you can easily identify most turfgrass at least to the genus level and often to the species level.

Study the drawings of the grass seeds in the illustration (Figure 1) and then refer to descriptions that follow for each type of seed.

**Tall fescue:** The largest turfgrass seed we use. Generally the lemma will be pointed or have short awns protruding from the end. The rachilla is generally long and pipelike in shape.

**Annual ryegrass:** Nearly as large as tall fescue, but flatter in appearance. Has long distinctive awns arising from the midrib of the lemma. The rachilla is shorter than tall fescue and somewhat flattened.

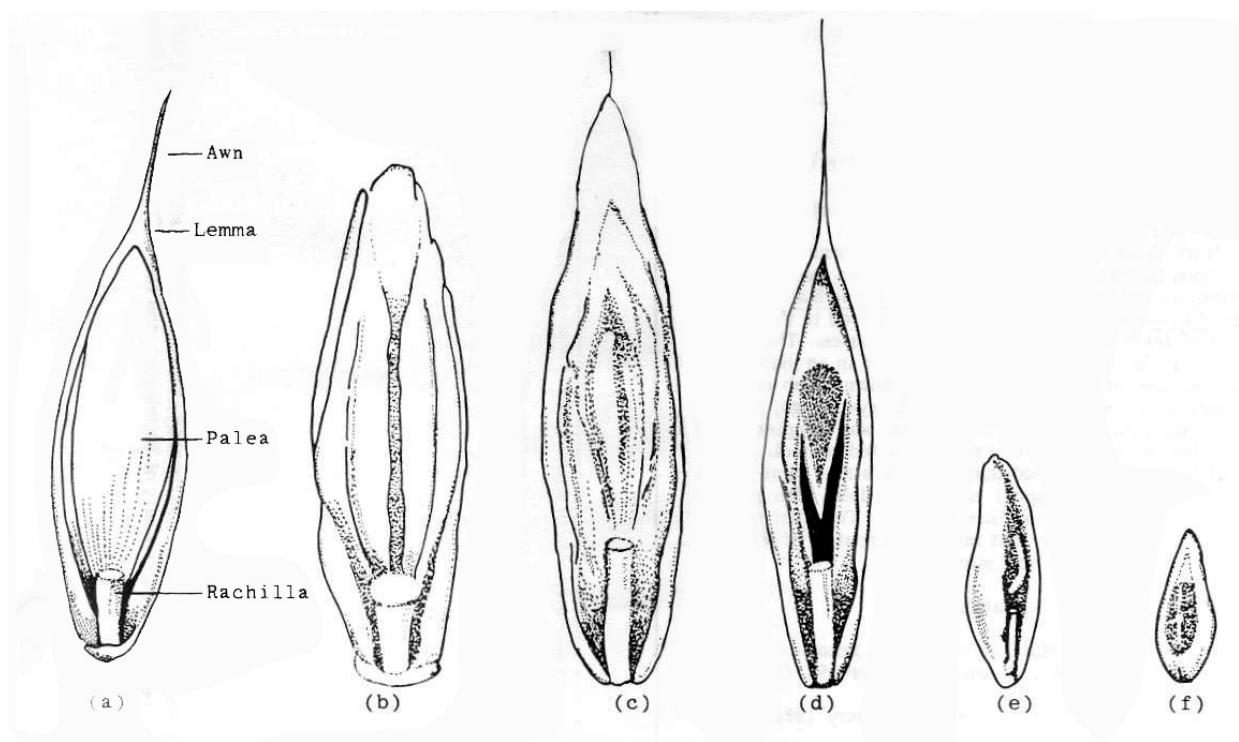
**Perennial ryegrass:** Nearly as large as annual ryegrass seed with some exceptions. Elka perennial ryegrass is extremely small compared to other ryegrasses. Rachilla is relatively short and strongly flattened. The tip of the lemma is generally blunt and somewhat jagged.

**Red fescue, Chewings fescue, Hard fescue:** All are similar in shape to the hull of a sailboat. Awns are straight and protrude from the tip of the lemma. The rachilla is generally pipelike though the end may be flared out. Red fescue is generally much larger than chewings fescue which is slightly larger than hard fescue.

**Bluegrass:** Dramatically smaller than the seeds just described. Bluegrasses do not have awns. The rachilla is thin and pipelike. Size definitely sets this grass seed

**Bentgrasses:** Bentgrass is the smallest seed used for turf. It is somewhat unusual in that the caryopsis often separates from the lemma and palea. The small caryopsis is generally reddish brown to chocolate brown and shaped like a kernel of wheat. When intact the lemma is very similar in shape to the fine fescues. Awns are variable and sometimes absent. The extremely small size and separation of the lemma and palea from the caryopsis are the best markers for identification.

Next time you buy seed grab a handful and spread it out on a piece of paper. Separate out the different shapes and sizes and see if you can use the information above to identify them.



**FIGURE 1. Structures of the seed commonly used to identify grass seeds are labeled in (a). Comparisons of the adaxial side of grass florets showing the palea and rachilla of (b)**

**perennial ryegrass; (c) tall fescue; (d) red fescue; (e) Kentucky bluegrass; and (f) creeping bentgrass.**

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