

# Forget being PC, we've got a big game!

I am a high school student that has questions about grass selection for new athletic fields. I would like our school to have environmentally friendly fields and use native grasses. I figure the native grasses would not use as much water or pesticides. Can you suggest the best native grass to use on our field?

Florida Native

This question was received via a recent phone call from a Florida Gulf Coast resident. This is a difficult question for me to address without some bias since my thinking is contrary to that of most ecologists. In fact, I have been guilty of making comments that ruffled the feathers of a couple of ecologists. I was at first hesitant to use this question in "Q&A," but since it was not the first time I was asked about native grasses, I figured I might as well bring it out in the open.

Let's start with the definition of "native plant." This is a term used to categorize a plant by its origin. It is like saying, "My ancestors are from England." Then the question becomes how far back we go when we say "ancestors"? The Florida Native Plant Society has adopted the following phrase: "Florida native plant refers to those species occurring within the state boundaries prior to European contact, according to the best scientific and historical documentation. More specifically, it includes those species understood as indigenous, occurring in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape." So even with this exact definition it is often difficult to know what is and isn't a native. From my understanding, how could a named cultivar be considered a native plant?

Why the big issue with native plants? Well, many people say that these plants do the best job of providing food and shelter for native wild animals. Maximum diversity in animal populations requires maximum diversity of plants. Secondly, there is this notion that if the plant is native then it must be more efficient at the use of natural resources, since it adapted to the environmental conditions without human intervention. Non-native plants are sometimes invasive and out-compete native plants. They can do this because the natural pests, diseases or weather conditions that kept the plants in check in their homeland are missing. Of course this categorizes Bermudagrass, our most common athletic field grass in Florida, as an invasive non-native.

Now let's think about the general purpose of athletic fields. Athletic fields are designed as a surface for sports. Many of these sports require running, jumping, and falling; therefore the field should have a relatively smooth and cushioned surface that allows these activities without the expectation of injury. This surface is most often achieved with a dense turfgrass. I am sure there was a time and a place when low-density turf on athletic fields was more

acceptable. But today's expectations for surface quality are typically high for our athletic fields. Not only do we demand our fields to have a uniform covering of dense turf, but we also desire the fields to maintain a high level of quality through a season of play or longer. The high expectation has encouraged the many years of research that have developed new grasses cultivars and refined the way we manage these cultivars.

Our fields are generally not designed to provide food and shelter for wild animals. We do not seek a great deal of diversity in our fields growing warm-season grasses, since plant diversity reduces the uniform appearance generally expected on athletic fields. I think it is safe to say that athletic fields are generally designed and built for the enjoyment of people. In today's modern culture, we build lots of facilities for this sole purpose. So, I see nothing wrong with selecting a grass species and cultivar that optimizes the playing and management characteristics of the field.

Many of the native warm-season grasses do not have the density or hold up to the rigors of athletic events. There are a few that have been identified that can provide a turf in the Deep South. These include seashore dropseed (*Sporobolus virginicus*), saltgrass (*Distichlis spicata*), and knotgrass (*Paspalum distichum*). The problem with these grasses is their poor density compared to our commonly used turfgrasses and/or their ability to sustain density with foot traffic. Some ecologists also list seashore paspalum (*Paspalum vaginatum*) on list of native grasses, but I think that has proven to be incorrect. It can provide a nice turfgrass and its use for athletic field surfaces is growing. Some people suggest buffalograss, which is native to the North American plains. This grass has not performed very well in Florida's humid environment and high pest pressure. There may be other native grasses that perform better in other regions of the country.

The assumption that native grasses require lower inputs of water, fertilizer, and pesticides is really not true, especially when the quality expectations are high. While it might be true in a natural setting, an athletic

field is not designed to be a natural environment. So my advice is to pick a grass that can withstand the rigors of an athletic field in the local environment and manage it with as few inputs as reasonable possible. As a potential reference, you may want to look at Paul Sachs' new book "Managing Healthy Sports Fields: A guide to using organic materials for low-maintenance and chemical-free playing fields" (John Wiley & Sons, 2005). I have not had an opportunity to review the book, but if the title is any indication, it may be useful in designing maintenance schedules that fit your objectives. **ST**



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