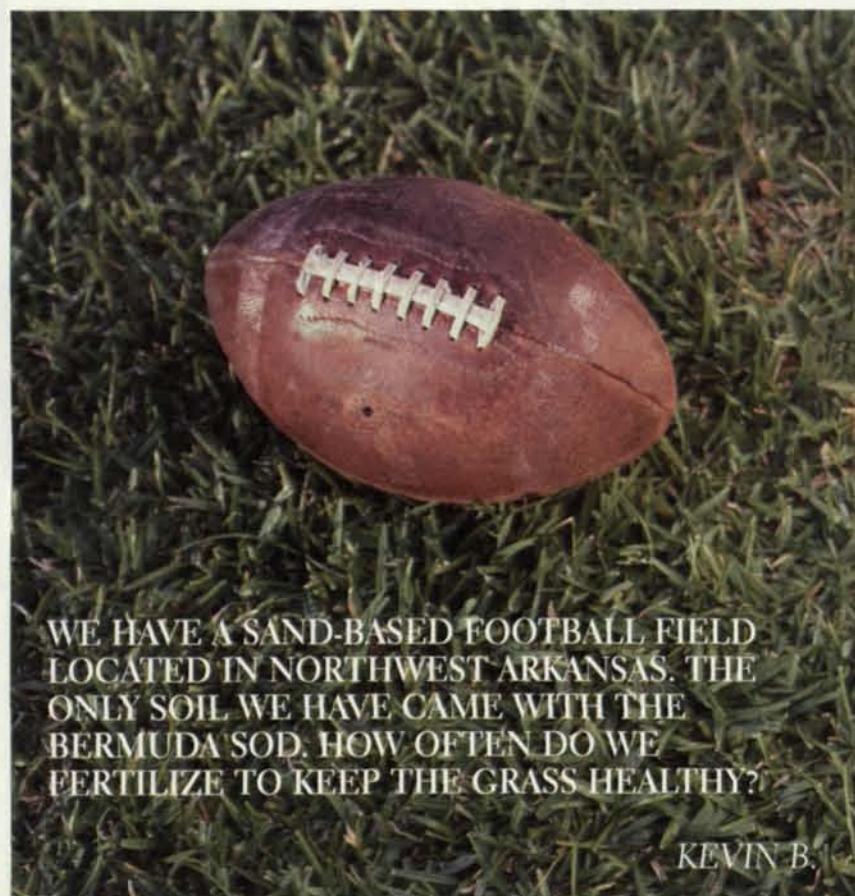


Fertilizing sod



WE HAVE A SAND-BASED FOOTBALL FIELD LOCATED IN NORTHWEST ARKANSAS. THE ONLY SOIL WE HAVE CAME WITH THE BERMUDA SOD. HOW OFTEN DO WE FERTILIZE TO KEEP THE GRASS HEALTHY?

KEVIN B.

Plan on fertilizing more often and with more nutrients compared to other "native soil" fields on your facility. Many times we think that nutrients like nitrogen and potassium are not present in a sand-based system because they are easily leached. It is true that these elements are easily leached if sufficient water is present for a leaching event.

Just for kicks locate where your drainage line can be seen leaving the field. It may tie into a storm sewer, but you can usually find a surface grate drain where you can see if water is leaching from the sand and moving in the drain lines. You may be surprised how much water it actually takes to have a leaching event.

When a big storm rolls through and you get 2 inches of rain or more you are likely to lose some nutrients by leaching. Normal irrigation will seldom cause a leaching event. Even in the absence of leaching you will need to apply more nutrients more often because the sand is not a source of nutrient and it has a very low cation exchange capacity, or very low ability to retain nutrients. Fields blended with peat or soil will hold more nutrients than sand-only fields. Some 6-inch sand pad fields have been built without peat in an effort to provide an improved performance field at a reduced cost. Without peat or soil mixed in the sand you can about double your fertilizer costs for the first 2 years. Even with sand based

fields that contain peat you will need to supply the entire required nutrient from fertilizer.

As a general guide apply nitrogen and potassium at the same rate, 1.0 to 1.5 lb. N or K/1000sq.ft./growing month. In Northwest Arkansas that could be 6 growing months from Mid April into Mid October for a total of 6 to 9 lbs. N or K/1000sq.ft./yr. On some sand-based bermudagrass fields I have used as much as 1.0 lb. N/1000sq.ft. every 14 days before I was able to achieve the type of growth I needed. Sand-based systems mixed with peat or soil may get by on as little as 4 lbs. N/1000sq.ft./yr. Phosphorous is another important nutrient and even though it is not easily leached it is often in short supply in sand fields unless you supply it. About 3 lbs. P/1000sq.ft./year should keep you from being deficient.

A soil test can be used to determine if you are too high or too low in phosphorous. With sand based systems try to keep P in the high category according to a soil test. In addition to N, P, and K, iron and other micronutrients are typically applied to sand based fields every 1-2 months.

Many times with sand-based fields it is the frequency of application that is more important than the total yearly amount you are applying. Those with sprayers typically follow a "spoon feeding program" that applies frequent but small amounts of soluble nutrients every 2 weeks throughout the growing season. Those using a dry application program may use a combination of fast and slow release nutrients applied every 30-45 days. As the field matures beyond year three you will find that more organic matter begins to build, the root system is more prolific, and you can often reduce the frequency and amount of fertilizer application.

As for the soil layer that came with the sod, it does supply some nutrients, especially K and P, but I consider it more of a headache than a blessing. I would rather remove it with coring to avoid layering and then supply the nutrients from fertilizer. Remember, the soil layer on the sod is only supplying nutrients if roots are actively growing in that layer. Many times this layer is too wet and further root growth below this layer is limited. In this case excessive aerification is necessary to remove the layer, mix the layer, bury the layer, or provide sand channels through the layer.

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Have Questions?

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