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What Causes Yellow Spots In Bahiagrass Pastures

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One of the most noticeable signs of iron deficiency in bahiagrass is the appearance of yellow patches. Yellowing of the whole pasture is normally a sign that the grass is deficient in nitrogen and/or sulfur. Thus one must be careful when trying to diagnose a nutrient problem visually as not to confuse deficiencies. The best way to determine what nutrient is deficient is to take a forage sample to your county extension agent and let him diagnose the problem. Dig up a clump of the grass as opposed to bringing in grass blades. This will make the identification of the problem easier.

Iron is involved in the formation of chlorophyll. As a result iron deficiencies cause a yellowing or chlorotic appearance in plant tissue. Iron deficiencies are common in Florida as a result of sandy soils which have a nutrient holding capacity.

Iron fertilizer is available in a number of forms. There is liquid iron which can be foliarly applied. This is probably the best way to assure that the iron applied is indeed taken up in the plant. Plants, such as bahiagrass have the ability to actually absorb iron through the leaf tissue as opposed to having to be taken up through the roots. Iron can also be applied to the ground as either iron sulfate or as a chelated iron. If cost is a concern, iron sulfate is by far cheaper than chelated iron.

When iron is applied to the ground in the form of iron sulfate, a large percentage of it immediately gets tied up in chemical forms unavailable to the plant root. For this reason chelated iron was developed. Chelated iron is much more available to plant roots. However, this form of iron is most likely cost prohibitive for pastures.

We have conducted research and demonstration studies at the Ona AREC on iron fertilization of bahiagrass. Preliminary data indicates that iron deficiencies first become noticeable in the spring. This is a result of the fast growth of bahiagrass causing an iron deficiency due to a dilution effect in the plant. Our studies have shown that when iron is foliarly applied or applied to the field as either iron sulfate or chelated iron that the yellowing in the grass disappears in a matter of a few weeks, however there does not appear to be any benefits in yield with the addition of iron. We have also noticed that yellow areas in the grass not treated with iron also disappears, though it may take a few months for this to occur. Based on this preliminary data it may pay to be patient and let the yellow areas disappear on their own.

It is a good idea to apply a complete micronutrient mix every three to four years to help prevent micro nutrient deficiencies such as iron from occurring. Field research studies are continuing in this area to evaluate various forms of iron fertilizer as well as to time of application in an attempt to save ranchers money.