



MULCH CORNER

BROWN PATCH

By John Ferguson

The season for "brown patch" is upon us. Brown Patch in St. Augustine and other grasses is a fungal disease that occurs most frequently at daytime temperatures of 75-85 degrees Fahrenheit and with cooler nighttime temperatures (sometimes in the spring but most commonly in the fall). It grows best in the moist soils that we have in the fall. Symptoms include yellowish grass with grayish ring of wilted grass at edges of patch, several inches to many feet across. Grass blades will easily pull off of stolons in grayish area. The disease damages roots, stolons, and nodes. The disease often starts in the spring and becomes bad in the fall, it survives best in turf grass with excessive thatch (healthy soils do not have thatch).

Have you ever wondered why some yards get brown patch and others do not? Have you noticed that your neighbor whom never fertilizes or waters their yard does not seem to get brown patch? There is a reason why!

Healthy soils have a species of bacteria in them called actinomycetes. This good bacteria eats the bad fungus that causes brown patch and other bad fungus like "Take All", "St. Augustine decline", etc.). This good bacteria is very salt sensitive like many species of bacteria. The reason we use salt in canned goods, ham, bacon, jerky and other foods to preserve them is that salt kills bacteria. Hence, when we apply an artificial fertilizer (chemically a salt) we kill this good bacteria that prevents this disease.

Brown Patch is a soil borne fungus (*Rhizoctonia solani*) that thrives in unhealthy soils. It is commonly found in soils that have been treated with synthetic artificial fertilizers, fungicides, pesticides, herbicides, and other toxic and dangerous chemicals.

Watering with municipal water also kills this good bacteria. The reason we add chlorine and chloramines to our public water supplies is to kill bacteria. As a result, the more one waters the greater



their chance of getting this disease. Coupled with the use of artificial fertilizers it is a sure fire recipe to get brown patch. Also when

we use synthetic nitrogen fertilizer it causes fast but weak growth. This weak growth is more susceptible to many diseases and insect problems and is always made worse by poor drainage and poor aeration.

Note: When lawn maintenance companies mow someone's yard with this disease they will often transfer the pathogen spores to your yard unless they clean and sterilize the mower between yards.

Treatment:

We have several options to control this disease. First, we have to quit doing the things that led to this disease in the first place.

For severe cases there is a product called "Actinovate" from Natural Industries that contains this good bacteria "actinomycetes". When applied according to directions it will quickly control this disease. This bacteria also kills (eats) some of the good fungus also. Hence after a couple weeks and the good bacteria has done its work we have to inoculate the soil with these other good microbes. The easiest, cheapest and best method is a good compost. Note: Low quality compost does not work.

There has been several studies that have shown that corn meal is also a natural way to control this disease. Agricultural corn meal works best. A few years ago the USDA tested many brands of grocery store bought corn meal and they found that Aunt Jemima stone ground corn meal worked the best.

A good compost is very effective at controlling brown patch and many other diseases. Compost should be applied at the rate of at least 1/4 inch but not more than a 1/2 inch layer at one time as we do not want to smother the grass.

Lastly a good compost tea has been shown to be an effective control. It takes more effort to make the compost tea correctly hence it is not the best solution for most home owners. Note: There are several companies in Houston that do it correctly.

Prevention:

- 1) Use only low salt good quality organic fertilizers
- 2) Apply compost 1/4 inch to 1/2 inch deep every year on your grass
- 3) Apply some type of trace minerals (e.g. green sand) every 2-3 years to your grass
- 4) Quit watering, you will not need it.

Note: My landscape has been featured in Better Homes and Gardens magazine. In the severe drought of 2011, I only had to water eleven times all year to keep everything in the landscape lush. What I saved on water costs paid for all the other things I did in the garden!



The picture above is a typical example of brown patch.