

## COMPARING KENTUCKY BLUEGRASS CULTIVARS FOR MICHIGAN SOD PRODUCTION

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When we are talking about major disease in sod production, we are talking primarily about three diseases: Helminthosporium melting-out (sometimes incorrectly called leaf spot), Fusarium blight, and stripe smut.

If you were asked which was the most devastating disease, I think most of you would answer Fusarium blight, and some might say stripe smut, but really the most devastating disease in Kentucky bluegrass is melting-out. Fortunately, there are many varieties or cultivars of Kentucky bluegrass with excellent resistance to the melting-out and, therefore, we tend to overlook it as a major disease problem. The reason Merion has been so widely grown and is so popular is that it was the first and for many years the only variety of Kentucky bluegrass that had excellent resistance to the melting-out. Since then other cultivars with excellent melting-out resistance have come along: Fylking, Pennstar, Adelphi, Parade, Baron, Galaxy, Touchdown, and others. If the cultivars did not have excellent Helminthosporium resistance, you would not have to worry about diseases like Fusarium blight, because the Kentucky bluegrass stands would not be around long enough for Fusarium blight to be a problem.

With melting-out eliminated as a problem through resistance cultivars, Fusarium blight and stripe smut have become the major problems in Kentucky bluegrass sod. Fusarium blight is the more important of the two because of its more conspicuous symptoms and because of the lack of a permanent solution to the problem. Stripe smut is more devastating in the long run and can destroy an entire turf area, but because it is a slow process that allows weedy grass to fill in the thinned areas it often goes unnoticed until large areas have been affected.

Fusarium blight can be a problem in sod production, but it usually is not, especially in good years when the fields are being turned over in less than a year and a half. Fusarium blight is more of a problem where sod is not harvested for two or three years. But whether it is your problem initially on the sod farm or the homeowner's problem on his lawn, it is really always your problem because dissatisfied customers can't do anything but hurt business.

Likewise stripe smut is not usually an important problem on the sod farm where the sod is being turned over rapidly. However, it can be a problem in older Marion and Windsor fields where these cultivars have been grown year after year. New infection tends to take place very rapidly because of the large number of spores present in the soil. Stripe smut is a systemic perennial disease; once a plant is infected, it will remain so for life. Moreover, all plants arising from that plant through tillering will also be infected. All that is needed for the grass plant to be destroyed is adverse environmental conditions.

If the sod industry's only concerns were disease problems on the sod farms, they could be solved by using melting-out-resistant cultivars. By blending three or more of these cultivars the stripe smut problem could be solved, and by proper planning and planting so the fields were harvested before they were a year and a half old the Fusarium blight problem could be solved. However, your concerns cannot end here; they must go to the customer. If he is unhappy with the product, then eventually your business will suffer. The question is what can be done to keep the customer satisfied? Solutions come under two categories: proper public relations and using the best available cultivars in blends and mixtures.

First, public relations: you as a sod industry have oversold your product. You have inadvertently implied it can do something it cannot. You have promised them a lawn that will last forever. Yet every appliance is built and sold with planned obsolescence; no one expects the car to last forever, and even your house needs paint, new roofing, new carpeting, and possibly even new siding. Sod should be sold the same way, with 10 years as a target date for replacement.

How do we produce a sod that will last 10 years?

The answer is simple--we must start with the proper cultivars. The proper cultivars means avoiding three diseases: melting-out, Fusarium blight, and stripe smut. It would appear that Adelphi, Majestic, Touchdown, Parade, and Kentucky bluegrasses offer the best solution for the future. There are, of course, many other cultivars resistant to melting-out, which could solve the problem, but Fusarium blight must also be taken into consideration, and the above-mentioned varieties offer the best tolerance, at least at this time. Blending three or four of these Kentucky bluegrass cultivars should solve the stripe smut problem.

Now that you have the best possible cultivars, you must insist on proper soil preparation prior to the laying of the sod. There is nothing sadder than to see good quality sod laid on ground with the consistency of asphalt. And yet time and time again, contractors or developers will remove the top soil and smooth off and compact the "gumbo" underneath with heavy equipment, then lay sod on top of this and expect it to grow. No one in his right mind would seed into soil in that condition, but somehow laying sod on top of it is supposed to solve all the problems.

Finally, the best cultivars in the world will not grow if they are not properly maintained. The Kentucky bluegrass blend needs to be mowed at a minimum 2" height and given about 4 pounds per 1,000 square feet of actual nitrogen a season with most of this being applied in the fall. Potassium (K) and phosphorus (P<sub>2</sub>O<sub>5</sub>) should be applied once a year in amounts determined from results of a soil test. Proper watering is also very important--there is nothing more frustrating than trying to explain to a homeowner he cannot properly water his 20,000-square foot lawn with one sprinkler that covers only 200 square feet at a setting.

I believe it would be worth the time, effort, and money for your sod growers' association to draw up a one-page fact sheet explaining some of the points I have made and either hand them out to your customers, if they buy directly from you, or give them to the landscaper, if you sell through him.