

United Seeds Technical Bulletin

High Endophyte and Grey Leaf Spot Resistant Grasses

United Seeds' high endophyte perennial ryegrasses are All Star3, Caddieshack II, Exacta II, Goalkeeper II, Monterey II, Revenge, SR 4600, and Top Hat2. These exciting new varieties combine very high levels of endophyte as well as the latest in varieties showing excellent resistance to grey leaf spot. These varieties were also selected for their excellent turf quality and color. When a high endophyte perennial ryegrass is needed for your application, these elite varieties can be used with confidence.

5-Iron Ryegrass Blend is United's brand name for its endophyte-enhanced and now grey leaf spot resistant perennial ryegrass. The varieties used in **5 Iron** are: All Star3, Exacta II, Revenge GLX, SR 4600, and Kokomo II.

The endophyte is technically a fungus (*Acremonium lolii*) that grows within the leaf and crown parts of infected grasses. The fungus secretes alkaloid compounds which appear to act as natural "insecticides" within the plant. Under non-stress conditions both high and low endophyte ryegrass turf will look identical. However, when under stress from insects such as sod webworm, billbugs, and chinchbugs; the high endophyte ryegrass may have substantial resistance to these surface feeding insects and exhibit better performance and persistence than low endophyte turf. Also high endophyte turf often performs better under summer stress conditions of heat, humidity and moisture deficits.

The endophyte is spread only by seed, and will remain viable for a year to 18 months under ideal storage conditions. Seed, 80% endophyte infected is considered to be a "high" level of endophyte.

High endophyte turf should never be used for grazing by animals. The same compounds that resist insect damage will also harm grazing animals. Horses are particularly sensitive to endophyte infected pasture or hay.

As mentioned, **5 Iron Perennial Ryegrass Blend** now has grey leaf spot resistant varieties. The benefits of these cutting edge varieties will be realized for years to come. Less fungicides, reduced cost of seed for replacement of damaged or killed grass and the amount of labor that goes into these operations are only a sample of the savings that will be seen when grey leaf spot is no longer a threat to your investment.

United Seeds is excited to offer a "high profile" Perennial Ryegrass blend for your operation. The one-two punch of endophyte enhancement and grey leaf spot resistance is sure to be a valued part of any application.

