

# Black Beauty Sod - See the Difference!



Black Beauty Turfgrass varieties are more drought tolerant and disease resistant than any other grass varieties that have been previously available.

Black Beauty Turfgrasses possess an invisible waxy coating covering the leaf surface of each grass blade. This protective coating is very similar to the natural, waxy layer that causes an apple to shine and helps to preserve the moisture inside the fruit.

Black Beauty Grass Sod holds up in poor soils of low pH where lesser tall fescue sod and seeding jobs fail.

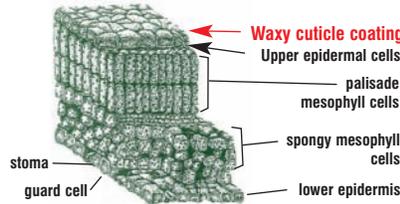


Black Beauty Sod. The invisible waxy coating, like that on an apple, wards off disease mycelia.



The waxy coating preserves moisture in the leaf, resulting in superior drought tolerance.

### Black Beauty Tall Fescue Leaf Cross Section



### Better Sod Tensile Strength



Black Beauty Sod mixed with 10% Kentucky Bluegrass won't tear when handled at one year old.

### Great Shade Tolerance



Black Beauty is very shade tolerant and performs better than fine fescues in fertile soil.



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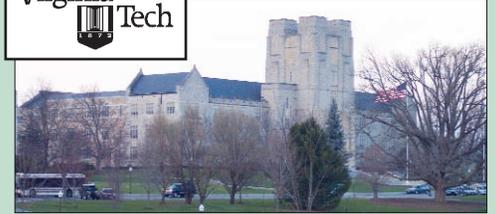


Black Beauty will not shred or tear.



Black Beauty grass varieties are very resistant to leaf rust disease.

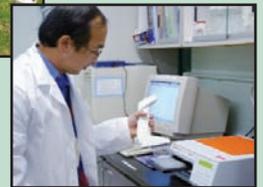
## Research makes the difference!



Virginia Tech University, Blacksburg, Virginia.



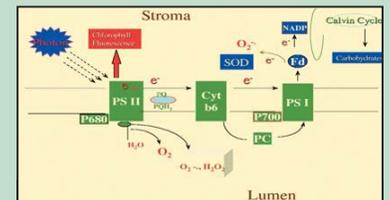
Dr. Xunzhong Zhang of Virginia Tech (VPI) performs the photochemical efficiency evaluation test in research test plots.



Dr. Zhang performs the antioxidant test.

Over the past several years Jonathan Green, Inc. has collaborated with the Virginia Polytechnic Institute and State University. Research has shown that grasses under environmental stresses produce excess free radicals which are toxic to plant cells, causing damage to proteins, lipids and other macro-molecules, leading to cell death.

The breakthrough Black Beauty varieties of turfgrass that Jonathan Green, Inc. has developed in recent years have been the result of screening potential breeding candidates by using these remarkable tests. We're now growing Black Beauty sod and making these exciting new turfgrasses available to our customers.



Under stress, electrons are donated to oxygen and form toxic reactive oxygen species such as superoxide ( $O_2^-$ ) which causes damage to photosynthesis. More energy is released as chlorophyll fluorescence. Plants containing high levels of antioxidants such as superoxide dismutase (SOD) resist oxidative stress.

Normal stress: Sufficient antioxidants, low chlorophyll fluorescence, normal electron transport.	Key to graphic
	☀ Energy
	✓ Antioxidant
	* Active oxygen species
	● Light capturing pigment complex (normal)
	● Light capturing pigment complex (under stress)
	⚡ Chlorophyll fluorescence
<p>High stress: Insufficient antioxidants to offset stress impact—high active oxygen species, high chlorophyll fluorescence, poor electron transport.</p>	