PlatinumTE
PASPALUM

www.PlatinumTE.com

PLATINUM TE™ SHADE/LOW LIGHT INTENSITY TOLERANCE

LIGHT FOR PHOTOSYNTHESIS

Grass plants such as Platinum TE are exposed to a wide range of light intensity, which includes the visible spectrum (red, orange, yellow, green, blue, indigo, and violet wavelengths) as well as the wavelengths that are outside this visible spectrum: infrared (lower energy red end of the spectrum) and ultraviolet (higher energy, non-visible blue end of the spectrum).

Chlorophyll collects and stores light energy from various wavelengths. Chlorophyll and turfgrass plants are visualized as being green in color because the middle of the spectrum (green) is reflected back to our eyes at the same time that this chlorophyll collects chemical energy from the long red and short blue wavelengths to produce carbohydrates in conjunction with phytochromes and phototropins.

TURFGRASS RESPONSE TO LIGHT

Turfgrass plant response to light is therefore a function of light intensity (the brightness of the light), duration of exposure (usually determined as the number of hours required to capture wavelength energy and produce sufficient carbohydrates to sustain turfgrass plant growth), and light quality [the broadness of the light (wavelength) spectrum].

Superimposed on these three light requirement components is the genetic capability of the specific turfgrass species and cultivar to utilize the available light and produce sufficient carbohydrates to sustain growth expectations.

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In general, there is a tremendous difference between actual tree shade exposure and low light intensity caused by cloudy, foggy, smoggy reduced-light quality conditions. The critical question to ask is: Are trees the primary limiting factor, since light quality, quantity, and duration are significantly hampered by heavy tree cover and grass growth is subsequently slowed or potentially shut down? St. Augustinegrass and zoysiagrass are both much more tolerant of tree shade problem areas than seashore paspalum. If tree shade is the primary limitation, you must remove or trim trees to promote improved light quality, quantity, and duration of exposure.

PASPALUM RESPONSE TO LIGHT

Platinum TE seashore paspalum has a genetically programmed superior tolerance to reduced light intensity, light quality, and light duration compared to hybrid bermudagrass. Paspalum requires a shorter duration of exposure to light (4-6 hours compared to 6-8+ hours for bermudagrass) to maintain growth and store carbohydrates from photosynthesis.

Paspalum also absorbs light wavelengths outside the visible spectrum during cloudy conditions as well as wavelengths that are refracted or deflected light sources better than bermudagrass cultivars.

Initially when comparing cultivars that are on the market, Sealsle 1 paspalum demonstrated the best overall low light intensity tolerance among all cultivars. However, Platinum TE has shown a superior tolerance to these reduced light conditions and definitely is the new and improved 'true excellence' paspalum cultivar for this trait.

Platinum TE has been planted on sports venues that have retractable roof stadiums (example: Minute Maid Park in Houston for the Houston Astros baseball team).