



The Original Solar Panels

By Jim Skorulski, agronomist, Northeast Region

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Plant leaves are the original solar panels with the amazing ability to absorb the sun's energy and convert it into simple carbon molecules – i.e., sugars – that are used for growth and other functions. Like the solar panels we use to produce electricity, plant leaves require maximum light absorption for optimal photosynthesis. No person investing in solar panels would have them placed in an area that does not receive full sun exposure. Yet, it is easy to take for granted the impacts of shade on a plant's ability to synthesize the energy it requires for normal growth. Full sun exposure is especially critical for close-cut, dense putting green turf. The fall season is a great time to review shade patterns across your playing surfaces and take action to provide at least eight to 10 hours of full sun exposure daily to all greens through the entirety of the season.



It's hard to imagine that anyone would place a solar panel in this shaded environment and expect to produce electricity. Keep that analogy in mind when evaluating the impacts of shade on a plant's ability to produce energy.

The arrival of fall has brought with it cooler seasonal temperatures which are much welcomed by weak-rooted turf and surfaces that are recovering from late-season damage. Cooler nighttime temperatures and shorter day length also trigger turfgrass to begin producing new roots and storing sugars that will help it survive flash freezes, hydration events and ice cover that have caused severe turf loss at many courses over the past two seasons. Tough weather can be expected in the winter months ahead, so now is time to focus on maintenance practices

that favor carbohydrate storage and avoid those that force plants to spend energy reserves. Here are some important practices to help that process:

- Maximize sun exposure
- Begin raising mowing heights in increments of 0.05-0.1 inch. Higher mowing heights will increase the size of the solar panel – i.e., leaf blade. Bigger leaf blades are better for accumulating carbohydrates. Mowing heights can be increased in increments through the remainder of fall. Keep in mind that raising the mowing height in late fall, after the turf has gone dormant, will provide little benefit for carbohydrate storage.
- Provide potassium where soils are deficient. This can be accomplished through granular applications or spoon-feeding programs.
- Avoid high rates of granular nitrogen in more northern areas of the Northeast Region. Fertility priorities on golf courses located in southern parts of the Northeast Region, or those who will be aerating greens in the coming weeks, will be different. Keep granular nitrogen applications at 0.5 pounds per 1,000 square feet on greens or spoon-feed with lighter rates of soluble fertilizers to meet the growth needs of your turf.

The fall season can provide some of the best playing conditions of the season. It also is the time to get turfgrass “solar panels” in good working condition to prepare for the long winter ahead.

Northeast Region Agronomists:

David A. Oatis, regional director – doatis@usga.org

James E. Skorulski, agronomist – jskorulski@usga.org

Adam Moeller, agronomist – amoeller@usga.org

Elliott Dowling, agronomist – edowling@usga.org

Addison Barden, agronomist – abarden@usga.org

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