



Thinning or removing trees to aid turfgrass photosynthesis is a key ingredient in a successful agronomic program.

WHY PHOTOSYNTHESIS IS IMPORTANT FOR GOLFERS

BY PATRICK O'BRIEN | AGRONOMIST, SOUTHEAST REGION

Plants performing photosynthesis is an essential component of life on our planet. Photosynthesis provides the air we breathe and the food we eat. For golfers, photosynthesis is also the key to enjoying great playing conditions. Without healthy turfgrass on a golf course, the game of golf isn't as much fun to play.

Many of us probably remember from our elementary school science class that plants require photosynthesis to live. To complete photosynthesis, three key inputs – water, carbon dioxide and sunlight – are required. For grass on a golf course, water is provided by rain events and supplemented with irrigation during dry periods. Carbon dioxide is provided by the atmosphere and the air golfers exhale. Sunlight provides the energy that allows grass plants to turn carbon dioxide and water into sugars that the plants use to grow.

Of these three key inputs, the one that most often limits photosynthesis on a golf course is a lack of

sunlight caused by shade from trees. Most golf course grasses require nearly full sunlight conditions for optimal growth. Without sufficient daily sunlight, energy production in the plants slows, which leads to thin, weak turf and poor playing conditions.

Shade caused by trees can be a major factor in poor playing conditions on tees, greens, fairways and roughs due to its impact on photosynthesis. When golf facilities consider planting a tree, it is always important to consider its future impact. Over a 20-year time span, most trees grow dramatically. If not managed properly, trees can overtake the landscape. Without proper attention and long-range planning, trees will outcompete golf course turf for sunlight and water. This will negatively impact photosynthesis on golf course playing surfaces and eventually cause poor playing conditions.

