



# Green Section Record

## REGIONAL UPDATE

November 2, 2018



*Covering ultradwarf bermudagrass putting greens is an extremely effective strategy to prevent winter injury.*

## FIVE WAYS TO MINIMIZE ULTRADWARF WINTER INJURY

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Cold winter weather last year was tough on bermudagrass. Thankfully, research from the University of Arkansas and field observations from courses across the Southeast has resulted in a better understanding on how to deal with winter weather. Below are five ways to minimize winter injury on ultradwarf bermudagrass putting greens.

### **Apply a wetting agent and plant growth regulator**

USGA-funded research at the University of Arkansas shows that applying wetting agents during fall helps speed ultradwarf bermudagrass greenup in the spring. The research also shows that wetting agent applications made during fall and throughout winter can help prevent winter injury related to desiccation.

Field observations suggests that periodic applications of trinexapac-ethyl during winter can reduce the risk of winter injury by reducing carbohydrate consumption during periods of warm winter weather. When temperatures are above 40 degrees Fahrenheit, making low-rate applications of trinexapac-ethyl every couple of weeks can prevent ultradwarf bermudagrass from using valuable carbohydrate reserves.

### Cover your putting greens

Another USGA-funded research project from the University of Arkansas shows that covering bermudagrass putting greens during extremely low temperatures is the best way to significantly reduce the risk of winter injury. The research suggests that greens in full sun should be covered when forecast low temperatures are 20 degrees Fahrenheit or colder. Shaded greens should be covered when forecast lows are 25 degrees or colder. The increase in temperature threshold for shaded greens accounts for weak turf and cool soil temperatures that are common in shaded environments.



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### Utilize a dead-air gap

The dead-air gaps in double-pane glass windows and your winter jacket add insulation that helps keep you warm. In the same way, placing things like pine straw, pool noodles or sections of 4-inch drainage pipe beneath a putting green cover will create an air gap that helps maintain soil temperatures at or above freezing during extreme or prolonged low temperatures. Some facilities only create dead-air gaps on greens, or areas of greens, that are at the greatest risk of winter injury.

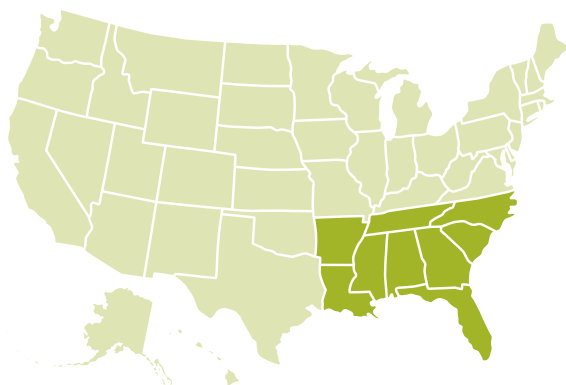
### Do not overseed

Overseeding weakens bermudagrass by introducing competition. Forgoing the introduction of overseeded turf improves bermudagrass spring greenup and the overall turf health of bermudagrass putting greens. Healthier greens are better suited to survive cold temperatures. Plus, exceptional putting conditions can be maintained without overseeding, as demonstrated by many courses throughout the Southeast that do not overseed their greens.

### Weigh the risk

Many facilities cite disruption to golf and the cost of purchasing and deploying covers as the factors that prevent them from implementing this invaluable insurance policy. If your facility doesn't already have covers, consider the potential lingering impact of having one or more dead putting greens next spring. Costs associated with turf recovery, lost revenue due to course closure or poor course conditions and the damage to a facility's reputation can have devastating effects. When considering the potential consequences of not covering, the costs associated with covers become a reasonable premium for such an effective insurance policy.

Contact a USGA Agronomist for more information on reducing the risk of winter injury on ultradwarf bermudagrass.



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