



Bermudagrass control 12 weeks after treatments with herbicides applied three weeks before fraise mowing (A), three weeks before and after fraise mowing (B), three weeks after fraise mowing (C) and only fraise mowing (D).

FRAISE MOWING

ENHANCES BERMUDAGRASS CONTROL

BY ADDISON BARDEN | AGRONOMIST, SOUTHEAST REGION

- Control options are limited for bermudagrass, which makes it challenging for golf courses to undertake a regrassing project
- Bermudagrass control was improved with two herbicide applications or when a herbicide was applied three weeks after fraise mowing.
- Non-selective herbicide applications made in conjunction with fraise mowing treatments can reduce the time required for bermudagrass eradication.

Prolonged disruption to golf is often cited as the greatest roadblock to eradicating undesirable bermudagrasses and regrassing with a superior variety. Due to the aggressive growth habit of bermudagrass, current programs require three to four applications of non-selective and selective herbicides over a six to eight-week period for control. Even with these applications, bermudagrass eradication can be difficult.

Fraise mowing has become popular because it can be used to reduce thatch, smooth unwanted undulations on flat areas such as tees, control weeds in cool-season turf, and even control some diseases. The potential uses of fraise mowing continues to expand with new research. Most recently, researchers from the University of Arkansas and the University of Tennessee teamed up to determine if fraise mowing could effectively control bermudagrass.

At four different sites over 2017 and 2018, the effects of fraise mowing and herbicide treatments on bermudagrass control were assessed. A herbicide combination of glyphosate at 3.2 quarts per acre, fluazifop at 1.5 quarts per acre, and a non-ionic surfactant was tested with and without a 1.5-inch depth fraise mowing. The timing of treatments included:

Treatment 1: Glyphosate + fluazifop + non-ionic surfactant applied three weeks before fraise mowing**

Treatment 2: Glyphosate + fluazifop + non-ionic surfactant applied three weeks after fraise mowing**

Treatment 3: Glyphosate + fluazifop + non-ionic surfactant applied three weeks before and after fraise mowing**

Treatment 4: Untreated control

**Each plot treated with a herbicide contained an area with and without fraise mowing.

These best-performing treatments were 1) a single herbicide application three weeks after fraise mowing, 2) a herbicide application three weeks before and three weeks after fraise mowing, and 3) two herbicide applications on a six-week interval with no fraise mowing.

Further, a single herbicide application three weeks after fraise mowing was the only treatment that controlled bermudagrass better than a single herbicide application or fraise mowing alone in Arkansas and Tennessee in 2018. In this study, the two-herbicide treatments on a six-week interval are the most similar treatments to current control programs, but provided the same level of bermudagrass control as one herbicide application made three weeks after a fraise mowing treatment.

The results of this research indicate that the length of disruption associated with a bermudagrass regrassing project can be reduced when herbicides are applied after fraise mowing. Additional research is needed to compare traditional bermudagrass control methods for fairway regrassing to this new fraise mowing method.