# Reducing Water Requirements in the Establishment of Bermudagrass with Polymer Coated Sand, Year Two

Wanjura, Benjamin (School: Christ the King Cathedral School)

Turfgrass is extremely important to many homeowners, athletes, and other people. It gives homeowners' lawns a healthy, aesthetic appeal. Athletes use turfgrass to play sports. One fundamental problem with turfgrass is the quantity of water required for healthy growth. About 30% of all water in the U.S. is used in landscape management, including turf. Turfgrass requires an even higher amount of water during the establishment phase. Reducing landscape irrigation could save valuable water and money. Last year, six cultivars of bermudagrass in seed or sprigs were tested with three levels of polymer coated sand in three irrigation zones to see if similar establishment could be achieved with minimal water. No significant differences were caused by polymer coated sand. This year, six different treatments of polymer coated sand were applied beneath bermudagrass sod in four different irrigation levels. Each treatment was repeated 3 times per irrigation zone and data were checked weekly. The hypothesis, if four application rates of polymer coated sand along with two application rates of polymer coated sand with nitrogen supplements are applied prior to bermudagrass sod in four irrigation zones, then the bermudagrass in the lowest irrigation zone with the highest application of polymer coated sand will establish just as quickly as untreated bermudagrass in the highest irrigation zone, was not supported. The polymer coated sand did not affect bermudagrass establishment, but upon analyzing data, it was found that the recommended irrigation levels are not required to establish or maintain healthy bermudagrass.

**Awards Won:**