



Effects of APEX-10 In Reduced Soil Moisture Levels

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Testing has demonstrated APEX-10 enhances drought resistance by stimulating the root development of plants and increasing antioxidant activity within the plant. The main objective of this trial was to evaluate whether the use of APEX-10 could reduce overall water requirements by extending the interval between irrigation cycles.

MATERIALS AND METHODS

Bentgrass and bluegrass were grown in pots, fertilized, and placed in a climate controlled growth chamber set to 75°F (day) / 65°F (night) for one week.

Following plants were then transferred to a greenhouse environment maintained at 82°F (day) / 65°F (night) for 8 week with APEX-10 applied according as follows

Bentgrass: 1.5 oz. per 1,000, 14-Days

Blue Grass: 3oz. per 1,000, 30-Days

Two primary groups were established, one treated with APEX-10 (test) and one untreated (control).

Each group was then subdivided into three irrigation treatment groups to evaluate varying irrigation rates and corresponding soil moisture levels over the eight-week trial period.

Irrigation Rates

3-Times Per Week

1-Time Per Week

1-Time every 2-weeks

Soil Moisture

25%

17%

7%

RESULTS & DISCUSSION

This protocol allowed for a comparative analysis of APEX-10's impact on turf performance under several different water availability conditions.

Bentgrass

Turf treated with APEX-10 maintained higher quality at **17% moisture** than untreated turf **25% moisture**.

At **7% moisture**, APEX-10 plants showed **less physical damage with faster recovery** once moisture returned to 25%.

Remarkably at **7% moisture APEX-10** plants were **statistically comparable** with the untreated turf at **25% moisture**.

Bluegrass

Throughout the trial, APEX-10 plants had consistently exhibited **superior quality and density** compared to the controls.

Additionally, APEX-10 treated turf had clearly demonstrated to have **faster and more robust recovery** following periods of moisture stress.

Bluegrass (Continued)

During the first 33 days of the trial, bluegrass treated with APEX-10 at 17% soil moisture exhibited **improved water-holding capacity** and **enhanced overall quality** compared to untreated controls.

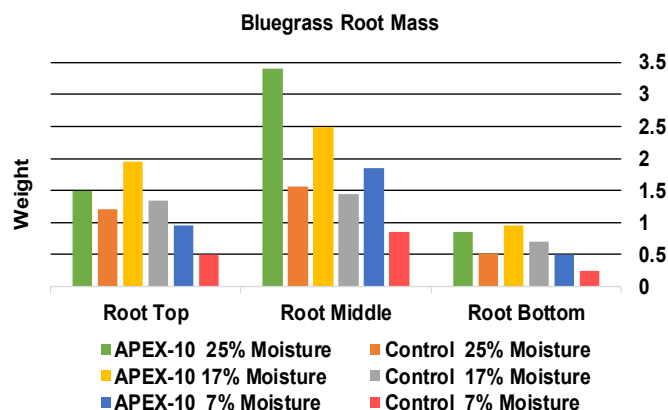
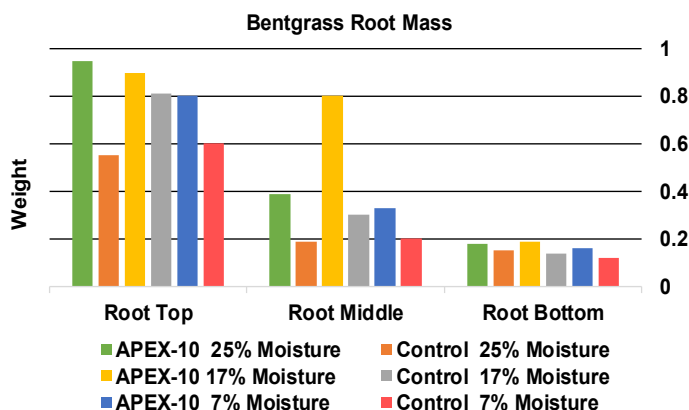
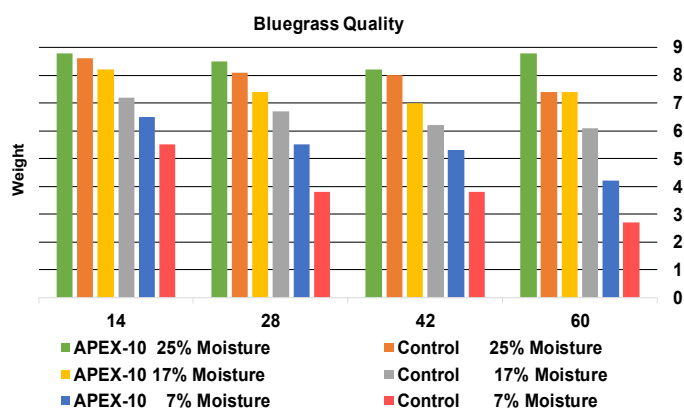
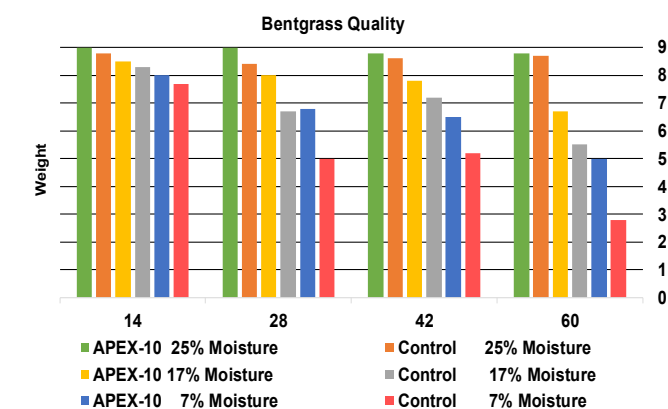


APEX-10 treatment also resulted in **increased shoot and root biomass**, with **higher shoot weights recorded in every treated plot** over the full eight-week period. These findings highlight the role of APEX-10 in promoting vigorous growth and improved plant resilience under reduced moisture conditions.

CONCLUSION

APEX-10 significantly enhances drought tolerance and post-drought recovery in turfgrass compared to untreated controls. Bluegrass quality improved notably, with even greater improvements observed in bentgrass.

These benefits are attributed to APEX-10's ability to stimulate root and shoot growth, which supports improved water conservation and enables faster recovery once water stress is alleviated.



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