Evaluation of In-Ground Irrigation Systems on Homeowner's Lawns

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Last year, a soil surfactant and different rates of nitrogen fertility were tested to see if they affect the surface characteristics of turfgrass with varied ET replacement. There were significant differences between the nitrogen fertility and ET replacement of the turfgrass. However, there were concerns with the reapplication of fertilizer and the effectiveness of the irrigation systems. The purpose of this project is to audit in-ground irrigation systems to determine distribution uniformity and precipitation rate of homeowner’s lawns. A variety of home lawns with similar in-ground irrigation systems were used. Distribution uniformity, precipitation rate, and amount of water applied by the in-ground irrigation system was measured. The hypothesis was not supported. The rotor heads did not have the highest precipitation rate; however, they did have the highest distribution uniformity. The spray heads had the highest precipitation rate overall. Using in-ground irrigation heads for watering has become a more common theme across the globe, even in an agriculture setting. Homeowners are spending hundreds of dollars a year to try and create a nice, green lawn with varied in-ground irrigation systems and not always having a high success rate. Higher water pressure supplied to irrigation heads cause more mist in the air, which costs homeowners money and lowers the distribution uniformity and precipitation rate of the systems. By altering the care of in-ground irrigation systems we could conserve up to 5,000 gallons of water per house while lessening monetary funds and waste to produce home lawns that are desirable.

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