Protein Changes in Response to Increasing Temperatures for Creeping Bentgrass. (C05-pote132545-Poster)

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Abstract:

Turfgrass stands decline during extended hot periods in the summer months. This study was conducted to compare the protein response to heat stress in bentgrass species and creeping bentgrass (Agrostis palustris) cultivars. Clones from creeping bentgrass cultivars 'L-93' and 'Penncross' were subjected to 35 C temperature in a controlled environment for 24-h. The plants were then subjected to 23 C for an 8-h recovery period. Leaf tissue samples were taken at time, 0, 2, 4, 6, 12, 24, 26, 30, 34-h encompassing both stress and recovery. Coommassie stained SDS-PAGE analysis found no differences in heat induced protein expression between cultivars. Future analysis will include labeled amino acid incorporation techniques to better determine heat-induced proteins. Seasonal protein content of velvet and creeping bentgrasses will be discussed. Heat shock protein expression of creeping bentgrass and geothermal Agrostis species will be compared.

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