

Allelopathy of Perennial Ryegrass Leaves and Roots on Seeded Zoysiagrass. (C05-zuk113945-Poster)

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Abstract:

Allelopathic properties of perennial ryegrass have been documented in other crops. Our objective was to determine if ryegrass allelopathy influences establishment of seeded zoysiagrass. In two separate studies, 20 Zenith zoysia seeds were planted in small pots containing potting soil amended with 0, 2, 12, or 23% (by wt.) fresh, or glyphosate-killed (GK), ryegrass leaves or roots. Shoot and root growth of zoysia were reduced in ryegrass-amended soil. For example, zoysia seedling numbers were reduced by 69% when fresh ryegrass leaves comprised 12% of the soil medium. Zoysia root area was reduced by 81% in soil amended with 23% GK ryegrass roots. Limited success with establishing seeded zoysia in mature ryegrass stands may be due, in part, to allelopathic effects of perennial ryegrass.

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