

Effect of Soil and Nutrient Management Practices on Performance of Collards. (S08-mylavarapu161606-Poster)

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Abstract:

Commercial production practices of collards in sandy soils of the southeastern US involve intensive fertilizer and irrigation applications. Tipburn is a nutritional disorder that has been linked to Ca deficiency and environmental factors; this problem often severely affects summer production. Tillage practices allow for development of a plow pan in order to avoid water losses in sandy soils. Standard fertilization practice was compared with a single application of Programmed Release Fertilizer (PRF) at planting. Subsoiling of the plow pan was included as an experimental factor to evaluate benefits from growth of the root system. PRF application produced statistically similar yields to that achieved with commercial biweekly fertilization program based on soluble fertilizer applications. Sub-soiling produced a significant increase in yield. The potential increase in nutrient leaching risk due to sub-soiling could be counteracted using PRF. Multiple regression analysis indicated that fertilizer management had approximately 42 per cent of bearing on tipburn incidence in collards. Environmental and physiological factors combined could probably explain the remaining variation.

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