## DISTRIBUTION OF THE RED IMPORTED FIRE ANT, SOLENOPSIS INVICTA BUREN (HYMENOPTERA: FORMICIDAE) UNDER VARYING CROPPING PRACTICES

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## ABSTRACT

This study evaluated the effects of contrasting cropping systems on red imported fire ant (*Solenopsis invicta* Buren) mound size and distribution. Over a seven year period (1998 - 2004), fire ant mounds were located and marked using GPS in a 14 - acre, split-field comparison of a conventional tillage production system and a conservation tillage system. The conservation tillage system included narrow row spacings, no surface tillage, site-specific P application, and broadcast deep tillage. The conventional system included disking and cultivating the soil surface, in-row subsoiling, and traditional row spacings. Results of this study indicate that the conservation tillage system, while beneficial to the environment, may result in increased fire ant density. Colony size was also found to be larger with the conservation tillage system, as determined by soil disruption.