

**CROP ROTATION FOR MANAGING RENIFORM
NEMATODES IN COTTON**

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Abstract

Crop rotation offers the only viable alternative to nematicides for managing reniform nematodes in cotton. In addition to reducing reniform populations, rotation is believed to improve soil tilth, soil nutrients, and reduce other soil borne pests and diseases. There has been relatively little research on crop rotation systems and their impact on reniform populations and cotton production. Recent investigative efforts over the past fifteen years reveal that crops including corn, sorghum, and some soybean cultivars are poor hosts to reniform nematodes. Rotation studies in Alabama and Mississippi show that as little as one year with a non-host crop is sufficient to reduce reniform populations to a safe level. However, reniform nematode populations return to damaging levels after one season back in cotton. There were no significant differences in reniform populations following one year with a non-host crop and three years with a non-host crop. However, cotton yields following three successive years with a non-host such as corn or sorghum were substantially larger than those with a one year non-host crop rotation. These higher yields following the longer non-host rotation may be due to factors other than reniform nematode management.