

Title: Impact of crop rotation on diseases, nematode pests, as well as on the economics of corn, cotton, and peanut production

Sub-Title: Influence of cropping sequence on the yield of peanut, cotton, and corn in Central Alabama, 2003-2005

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Peanut cropping frequency had no influence on the damage attributed to early leaf spot or on the incidence TSWV but did have a significant impact on the level of white mold damage. Corn was an excellent host for the cotton root-knot nematode. Fewest J2 larvae were found where corn was cropped behind one or particularly two years of peanut. In contrast, larval populations where corn was grown for three years and behind one or two years of cotton were higher compared to those for corn grown after two years of peanut. Highest corn yields were seen when peanut but not cotton was grown the previous year. Yield of cotton was higher when grown behind one or two years of peanut compared with one year of corn. Poorest yields were seen when cotton followed one or two years of cotton. Peanut cropped behind two years of corn had higher yields than the same crop following two years of cotton. Impact of cropping frequency was most noticeable on the yield of cotton and peanut. Peanut is a better rotation partner for cotton than corn. For cotton, the yield benefit between peanut and corn as a rotation partner was well over 350 lb of lint cotton per acre.