Soil Specific Effects of Management Practices on Cotton, Soybean, and Wheat. (C03-bauer092802-Poster)

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Abstract:

Crop yield responses to management practices can be soil specific. Our objective was to determine if crops grown on different soil types differed in their yield response to residue management systems. Two large experiments were conducted near Florence. In the first experiment, cotton (Gossypium hirustum L.) was grown with conventional and conservation tillage and with residue covers of cotton stubble, rye (Secale cereale L.) stubble, or corn (Zea mays L.) stubble. In the second experiment, a wheat (Triticum aestivum L.) and soybean (Glycine max L.) double crop system was grown with conventional and conservation tillage and with different deep tillage treatments. Using data from the two predominant soil map units in the experimental areas (Norfolk loamy sand and Bonneau loamy sand), interactions occurred between soil map units and soil management factors for cotton and wheat yield, but not for soybean yield. For both wheat and cotton, the two soils had similar yield responses to the management factors in the conservation tillage regime, but yield responses to the management treatments differed between the soil map units in conventional tillage.

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