Influence of Crop Residue Removal on Yields of Corn, Sorghum, and Soybeans With No Tillage

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1981 Annual Meetings

AMERICAN SOCIETY OF AGRONOMY
CROP SCIENCE SOCIETY OF AMERICA
SOIL SCIENCE SOCIETY OF AMERICA

Atlanta, Georgia
November 29–December 4, 1981

For 3 years, yields were significantly influenced by amount of crop residue on the soil surface. Where surface crop residues were completely removed, average yields of corn, sorghum, and soybeans were 24, 6, and 27% lower than where residues were not removed. Removal of 50% surface crop residues had little or no effect on yields. Yield reductions were directly related to higher soil and plant canopy temperatures and lower soil water contents where surface crop residues were removed.