Crop Residue Production After Conversion From Perennial Vegetation to Annual Cropping. (S06-tanaka090141-Poster)

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Abstract:

The Conservation Reserve Program (CRP) was established by the Food Security Act of 1985 to assist producers with highly erodible land (HEL). After ten years in permanent vegetation, these lands could be put into crop production. One of the concerns was whether CRP lands could be managed to conserve the soil and water resources to provide sustainable cropping systems. Objectives of our research were to determine the influences of grass management, N fertilizer, and residue management on crop residue production and the quantity of the surface soil covered by crop residue. Hayed and no-hayed treatments (grass management) were whole plots, and N fertilizer (0 and 67 kg N/ha) and residue management (conventional-, minimum-, and no-till) were strip-plots in a randomized complete block design with four replicates. The annual cropping system was spring wheat-winter wheat-dry pea. Grass management did not significantly influence crop residue production for the first four years of annual crop production, but residue management increased dry pea residue production for no-till by 27% over conventional-till. The following year after seeding spring wheat, greater dry pea residue production on no-till increased the soil surface covered by residue 370% when compared to conventional-till.

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