

FLUE-CURED TOBACCO IN A STRIP TILL PRODUCTION SYSTEM

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ABSTRACT

A four-year study was conducted at Pee Dee Research and Education Center (PDREC) to compare the effects of conservation tillage tobacco production under crop rotation to conventionally produced tobacco on a South Carolina Coastal Plain soil. A separate two-year study was conducted to define the impact of in-row cultivation and nitrogen application rate on conservation-tillage tobacco production. Flue-cured tobacco was planted into strip till without bedding or into a conventional bedded production system. All plants received in-row subsoiling. In-row cultivation of strip tilled tobacco and conventionally produced tobacco were evaluated under three nitrogen levels: recommended, recommended + 15 lb/A, and recommended + 30 lb/A. Other than the tillage system and differences noted, traditional PDREC production, harvesting, and curing practices were performed. Conservation tillage tobacco production resulted in a negative impact on tobacco yield, quality, and lodging. The negative attributes of strip till tobacco production can be partially overcome by cultivation. Increased nitrogen tended to improve yields, but at the expense of leaf quality and chemistry. These studies indicate the need for additional research in conservation-tillage tobacco production.