Evalution of the Realistic Yield Expectations of Soil Map Units in the North Carolina Coastal Plain. (S08-lohman142709-Poster)

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Abstract:
Realistic Yield Expectations (RYE) have been developed in North Carolina to assist in site-specific farming decisions that will improve N-use efficiency and reduce N contamination of ground- and surface water, especially in the Neuse River Basin. We conducted this study to determine whether correlations exist between RYEs, actual yields, soil map units, and soil test results. Yield data has been collected for three site years in two Coastal Plain fields. An intensive soil survey of the fields was completed in 2002 and will compare the information to that in the 1974 Wayne County Soil Survey. Intensive soil sampling from 0 to 0.2 m was conducted at 343 sites on a 21.3 m equilateral grid spanning 14.74 ha in the adjoining fields. These samples were analyzed and used to map the spatial distribution of P, K, and lime requirement. Soybean (Glycine max (L.) Merr.) and wheat (Triticum aestivum L.) yield maps will be correlated with soil test results, soil map units, and their associated RYEs. We will use the results of the yield map analysis and soil tests to evaluate RYEs, and to help optimize strategies for sampling and management to improve N-use efficiency and minimize N loss.

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