# A Comparison Study of Agricultural and Forested Watershed Stream Water Quality Indicators in Middle Tennessee. (A00-haynes124021-Oral)

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## Abstract:

A study was conducted on the Highland Rim in Middle Tennessee to determine the effects of cattle access to streams on stream water quality. The water quality of a stream that traverses an agricultural watershed where cattle have access to the water was compared to the water quality of streams within a forested watershed that has no cattle access. Cattle access had little effect on stream water dissolved oxygen content, temperature, or electrical conductivity. Cattle access did significantly increase fecal coliform count and significantly decrease benthic organism populations and diversity, particularly affected were benthic organisms' known to be sensitive to degraded water quality. A site approximately four km downstream from the points of cattle access to the affected stream was also analyzed; Benthic organism populations compared favorable with the streams in a forested watershed, fecal coliform counts were intermediate between the forested watershed and the agricultural water shed at the sites of immediate cattle access.

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