Impact of Incomplete Cost Analysis of Agricultural Practices on Agronomic Recommendations - Evaluating Optimum Nitrogen Fertilizer Rates for Corn in Ohio. (S04-mccartney163558-Poster)

Authors:

- D.McCartney - *The Ohio State University*
- C.Bedet - *The Ohio State University*

Abstract:

It is standard economic practice to deduct variable costs from the gross value of a product before estimating the profitability of a practice. Variable costs are often ignored or severely underestimated in the estimation of agricultural practice profitability. Variable costs associated with harvest equipment, labor, hauling, handling, crop drying, phosphorus replacement, potassium replacement and calcium replacement are substantial. Full accounting of these costs reduces the net value of corn to less than 60% of the gross value in an average year. Ohio's nitrogen (N) recommendations are published in OSUE bulletin E-2567. Several tables are included that present corn yield results from experiments with various N rates. Regression analysis of the data from spring-applied recommended practices resulted in the equation: Proportional yield = 0.486 + 0.0054N -0.0000136N^2, R2 = 96%. This equation was used to calculate the yield response curve at varying yield levels. Various corn price, N price and variable cost scenarios were evaluated. Including variable costs produced corn price to N cost ratios that were much lower than usually considered and resulted in lower optimum N levels.

Corresponding Author Information:

Charlotte Bedet
The Ohio State University
1680 Madison Avenue
Wooster, OH 44691

phone: (330) 263-3725
fax: (330) 263-3686
e-mail: bedet.1@osu.edu

Presentation Information:

Presentation Date: Tuesday, November 12, 2002
Presentation Time: 2:00-4:00 pm
Poster Board Number: 1435

Keywords:
corn yield, nitrogen rate