Are We Managing for Higher Yields? (A09-fixen093350-Oral)

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Abstract:

A large and frequently expanding gap exists between proven attainable crop yields and typical yields. For example, since 1965 Iowa average corn yields have been increasing 1.5 bu/A/year while contest winner yields are over 150 bu/A higher and are increasing more than 4 bu/A/year. A few select growers are consistently producing exceptional yields. They typically employ a system focus that pays great attention to detail over a long term. Critical controllable production factors are managed simultaneously at optimum or non-limiting levels for exceptional yields. Are we managing for higher yields? Since crop yields continue to climb, the answer must be yes. However, evidence indicates growers today may be experiencing a lower fraction of attainable yield than in the past. To gain insights into why this might be occurring, current nutrient management practices and trends and other cultural practices will be contrasted with those believed necessary for higher yields. Biotechnology, precision technologies, and calibrated crop simulation models are examples of tools that have the potential to allow more aggressive pursuit of higher yields while addressing environmental and cost concerns.

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Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 11:00 am

Keywords:

high yields, crop management trends, nutrient management, cropping systems