Factors Affecting the Yield Response of Narrow Row Corn. (C03-thelen103955-Poster)

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Abstract:

Previous research at Michigan State University indicated that there is a potential for significant yield increases with corn grown in row widths less than 76 cm. However, very little work has been done to determine the management and environmental factors that favor a positive yield response to narrow row corn. The objective of this research was to define conditions such as soil type, tillage system, fertility system, and latitude that favor a positive yield response to narrow row corn. In three of four site years the yield increase from decreasing the row width from 76 cm to 38 cm was greater on course textured soils compared to fine textured. On average, the yield increase for course textured soils was 571 kg/ha versus 282 kg/ha for the fine textured clay soils when row width was narrowed from 76 cm to 38 cm. Latitude, between 42o and 45o N, did not effect the row width response to corn grain or silage yield. The yield response to narrow row widths was greatest in high residue tillage systems such as no-till and fall chisel systems. In addition, it was found that narrow row, high population corn will require an aggressive fertility system to maximize yield potential.

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