Soybean Response to Late Season Nitrogen Applications. (S04-lentz143536-Poster)

Authors:

- E.M.LENTZ - *THE OHIO STATE UNIVERSITY*

Abstract:

Soybeans utilize nitrogen at a high rate during seed fill at a time when nitrogen fixation is decreasing. It has been suggested that additional nitrogen may increase yields at this time. This multiyear study evaluated the response of soybeans to N at different reproductive growth stages. A group 2.9 soybean variety was planted into corn stubble in 1999, 2000, and 2001. Plots received a broadcast application of 84 kg per ha N from urea, urea plus a urease inhibitor, or control-released N (polymercoated urea). Nitrogen was applied at growth stages R3, R5, and R6 for each N source. One plot received zero N. Differences were detected only in one year among treatments for N source and growth stage. Compared to the zero check, several treatments had larger yields in two of the three years. The growth stage R6 treatment receiving urea plus a urease inhibitor was the most consistent. Low rainfall for several weeks after application may have caused the lack of response for this treatment in one of the three years. The success of supplemental N to soybeans during reproductive growth stages may be dependent upon timely and adequate rainfall after application.

Corresponding Author Information:

Edwin Lentz
The Ohio State University
1219 W Main Cross St, Suite 202
Findlay, OH 45840

phone: 419-422-6106
fax: 419-422-7595
e-mail: lentz.38@osu.edu

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