Critical Concentrations of Trifoliate Leaf K for Conservation-Till Soybean. (S04-yin140408-Poster)

Authors:

- X.H.Yin* Department of Agronomy, Purdue University
- T.J.Vyn Department of Agronomy, Purdue University

Abstract:

Adequate leaf K concentrations needed for soybean production in conservation tillage systems may be different from those under conventional tillage since the distributions of soil K and soybean roots vary markedly with tillage systems. No information is available about critical leaf K concentrations for soybean on no-till soils with stratified exchangeable K concentrations. This study was conducted at three locations in Ontario from 1998 through 2000 to estimate the critical value of trifoliate leaf K for conservation-till soybean on soils with low to very high K levels and a 5 to 7 yr no-till history. The critical level of leaf K at initial flowering for soybean in conservation tillage was estimated to be 24 g/kg, or double the critical value of 12 g/kg used in plant analysis interpretations for soybean in Ontario and well above the 17 g/kg minimum often used in the Corn Belt states. Therefore, adoption of a higher critical leaf K concentration seems to be essential in appropriate evaluations of plant K nutrition for conservation-till soybean.

Corresponding Author Information:

Xinhua Yin Purdue University Department of Agronomy, Purdue University West Lafayette, IN 47907-1150 phone: 765-496-2211 e-mail: xyin@iastate.edu

Presentation Information:

Presentation Date: Wednesday, November 13, 2002 Presentation Time: 9:00-11:00 am Poster Board Number: 2321

Keywords:

soybean, trifoliate leaf K, conservation tillage, relationship