Potassium Fertilization Effects on Isoflavone Concentrations in Soybean. (S04-vyn103923-Oral)

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Abstract:

Soybean isoflavone concentrations vary widely, but the contribution of soil fertility and nutrient management to this variability is unknown. Field experiments from 1998 to 2001 on soils with low to high exchangeable potassium (K) concentrations evaluated K fertilizer application and placement effects on isoflavone concentrations and composition of soybean in various tillage and row width systems. Significant increases in daidzein, genistein, and total isoflavone in soybean seed were observed with deep-banded K or surface-broadcast K fertilizer on low and medium K soils. Both individual and total isoflavones were positively correlated with seed yield, and concentrations of trifoliate leaf K and seed K.

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