Relationships between soil properties and soybean performance. (A08-martin124128-Poster)

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Abstract:

The objective of this study was to find which variables explain soybean performance in two production fields. Field properties included topographic variables and soil physical and chemical properties. Soybean performance variables collected in the seasons 2000 and 2001 were grouped into nutritional status variables and early, and late plant performance variables. The differences in dataset scale, which ranged from 170 to 100,000 observations, were approached by estimating values of dense variables in the location of the sparse variables with ordinary kriging. The relationships between groups of variables were estimated with canonical correlation analysis. The canonical correlation coefficient between field and plant variables was greater than 75% in each year. The correlation between early plant status, and early and late plant performance did not exceed 55%. The variables that explain yield the best were remote sensing and topographic information.

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