Precision Ag Research: Optimizing Variable Rate Seeding in NYS

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Summary

• Create a model to select hybrid categories and population rates given certain soil properties/conditions

• Currently including six major layers in the model
  • As-planted
  • Topography
  • NRCS soil survey
  • Veris soil sampling data
  • ½ acre grid soil sampling data
  • Yield
Prediction Models

Variation in Yield = Variation in Topography + Variation in Soil Composition + Variation in Soil Nutrients

Yield in bushels/acre:

Elevation in feet:

Soil type:

Soil pH:
The Numbers

P9675AMXT
Grower Practice
• 35,000 seeds/ac
• Yielding a profit of ~ $615.68/ac
The Model
• Profit of ~$676.14/ac
• Increasing grower profit by $60.46/ac

P9690AM
Grower Practice
• 35,000 seeds/ac
• Yielding a profit of ~ $624.18/ac
The Model
• Profit of ~$648.36/ac
• Increasing grower profit by $24.18/ac

Mixed hybrid model increases profit by ~$91.56/ac