



New Online Tool Helps Farmers Optimize Seeding Rates

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Iowa farmer Jeff Frank checks the quality of soybean planting after using the online simulator. Photo by Joseph L. Murphy/Iowa Soybean Association.

Iowa farmer Jeff Frank checks the quality of soybean planting after using the online simulator. Photo by Joseph L. Murphy/Iowa Soybean Association.

Adjusting soybean seeding rates based on the potential for attainable yield can significantly reduce seed cost for farmers. To this end, a team of researchers has developed an interactive web tool to better calculate these rates.

Called the Soybean Variable-Rate Seeding (VRS) Simulator, the tool was developed with the R-Shiny package for use in yield environments in the U.S. Midwest. As reported recently in *Agronomy Journal*, the tool requires just a few simple inputs: three years of yield monitor data, seed cost, and market price. With that, the simulator identifies yield environments and estimates the potential economic benefits of VRS prescriptions, including a step-by-step guide using a real, on-farm yield example

dataset. Simulations indicate that following VRS recommendations could increase profits between \$2 and \$23 per acre over fixed rates.

The VRS simulator is part of a movement to develop user-friendly interfaces that empower farmers to turn agronomic knowledge into practical solutions to optimize yield and profits.

Adapted from Correndo, A., McArtor, B., Prestholt, A., Hernandez, C., Kyveryga, P.M., & Ciampitti, I. A. (2022). Interactive soybean variable-rate seeding simulator for farmers. *Agronomy Journal*, 114, 3554– 3565. <https://doi.org/10.1002/agj2.21181>

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