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. Ph

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.