



# Creating a Variable Rate Seeding (VRS) Plan for Corn

**Adjusting corn seeding rates to variable** soil conditions in a field can improve overall field productivity. Corn planters with the capability of varying seeding rates on the go are becoming more common. VRS has been shown to be most practical in fields with soil variability, particularly in areas with less-than-ideal growing conditions. Optimum corn seeding rates may vary from 5,000 to 12,000 plants/acre (ppa) across a field due to variations in soil productivity. The key to success with VRS begins with identifying specific management zones within each field.



Optimum seeding rate and eventual plant population/acre may vary with soil conditions and other factors.

## **Benefits of VRS**

Ron Heiniger, extension corn specialist, North Carolina State University,<sup>1</sup> encourages corn growers to consider the value of VRS on their farms.

**“Variable rate seeding can help them improve the return from their water investment and reduce seeding rates and costs in the less productive fields or portions of fields.”**

**-Ron Heiniger**

“VRS can be particularly valuable when corn prices are down and the best way to increase income is to maximize corn yield on every acre,” he says. “Corn growers with irrigated fields or high organic matter soils where yield potential is high should consider increasing seeding rates. Those farmers may have sandy areas under the pivot, areas where the irrigation doesn’t reach, and unirrigated fields with lower yield potential. It should be more economical to reduce seeding rates in those areas to reduce costs and reduce risks.”



Heiniger encourages growers to study yield monitor records to determine the yield potential for each field. Fields with varying levels of yield potential should be divided into management zones. “Even smaller growers without yield monitors certainly know their best fields and their lower yielding fields,” Heiniger says. “They can simply plant higher populations in the better fields and lower populations in less productive fields. If a field never produces over 100 bu/acre, there is very little reason to plant more than 18,000 spa. By reducing seeding rates on the less productive areas, growers can lower their risk of losing money.”



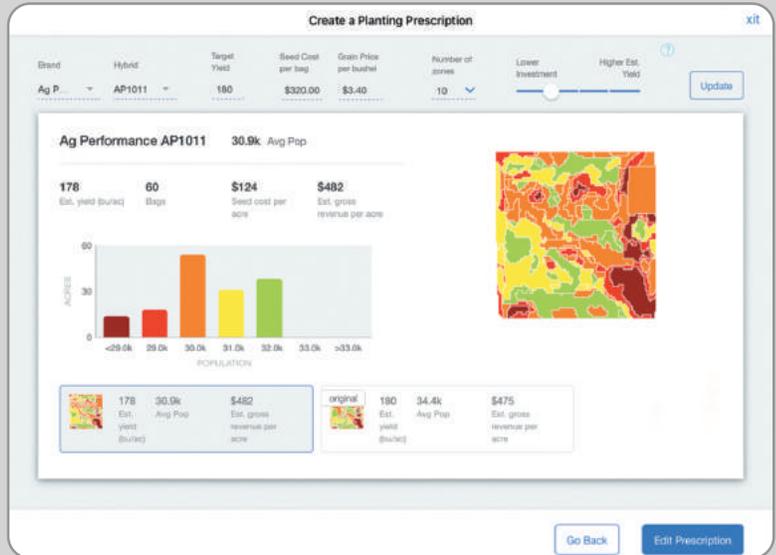
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## HOW TO CALCULATE VRS

### Management Zones

Monsanto agronomists have accumulated years of data showing how specific corn products perform at various seeding rates and under various soil and growing conditions. Matching products with the highest yield potential to soil productivity levels throughout a field is essential for maximizing yield potential. Growers should accumulate both yield history and soil data from each field to identify management zones where specific corn products and/or VRS may increase yield potential. Additionally, Climate FieldView™ creates customized planting prescriptions based on field history.

Go to [www.climate.com](http://www.climate.com) to learn more.



Climate FieldView™ allows you to create custom prescriptions using satellite imagery or historical yield data to more accurately identify management zones.

### Yield Data Recommendations

To develop a VRS plan, growers should compile field-by-field records, including:

- A minimum of three years of yield data, two of which are corn, with an average yield of 120 bu/acre or greater.
- Field coverage must be 85% or greater.
- Grower provides a target yield based on fertility program.

Use the table on page three to help determine your VRS plan for each field.

### Planter Setup

With all the data collected and a VRS prescription in place, growers should be aware that planter set up and operation can greatly influence VRS success. Data from studies at the Monsanto Learning Center at Scott, Mississippi, showed that for each 1 mph increase in planting speed, corn yield decreased by 4.3 bu/acre when averaged across planter meter types and under the conditions of this trial. Another study showed that a 1 inch increase in the standard deviation of seed spacing resulted in a 5.05 bu/acre yield decrease. VRS prescription, product selection, proper fertility and planter accuracy combine to improve corn yield potential.

