

VARIABLE SEEDING RATES: OPTIMIZING YIELD OPPORTUNITY AND MINIMIZING SEED COSTS

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ABSTRACT

Precise seeding rates are becoming more important as yield levels rise and seed costs increase. This is particularly true in corn where there is a clear link between seeding rate and yield. Where water and nutrients are readily available yield continues to increase as the number of seeds per acre or hectare increases. In comparison where water is limiting there is a precise seeding rate at which yield is maximized. When yield responses and seed costs are considered together it is apparent that seeding rate is the second most important decision that a grower makes during the season following variety selection. With the introduction of planting technology that can adjust seeding rates based on field maps or other inputs growers now have the tools needed to precisely place seed at rates that fit the capabilities of the land where the seed is planted. Several important factors influence yield responses to changes in seeding rate including water holding capacity, plant spacing and row geometry, planting conditions, and fertility. This presentation will examine the role of these factors in developing a field map for making seeding rate changes on the fly. While this presentation will focus on corn most the principles discussed are applicable to other crops.

Keywords: seeding rate, field variability, water holding capacity