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Corn 2011 – The Good, Bad and Ugly

As planting season approaches, there are several things to consider for corn production. The first is hybrid selection. There has been much time spent on this attribute and with help from various yield trials and information from your seed representative, you probably have the hybrids lined up. If not, this needs to be done soon to insure that the hybrids you want are available.

Seeding rate is the second most important decision because it directly affects the "good" of high yield corn. The good refers to increasing light use by the plant. The best way to optimize light use is to have the optimum number of plants in the field. However, there is no easy answer to this. Data indicates that the optimum interception of radiation by corn plants came at populations near 40,000 per acre. In comparing row widths, narrower rows intercepted more light than twin rows or conventional rows. The higher plant populations planted in narrower rows, consistently produced higher yields, but made the most difference in higher-yielding fields. In lower yielding fields, yields across all row spacing's and plants per acre were comparable with a slight edge for higher plant populations. The risks to higher plant populations comes from the "bad"- when plants are stressed from lack of nutrients and the "ugly" – when plants are stressed due to lack of moisture or high temperatures.

Managing stress in the corn plant often can equate to managing financial stress for the grower. Planting high cost seed at high rates and getting less than optimum yields to pay for the seed and multitude of other production costs, isn't good for human or plant stress. Establishing a good root system is the first line of defense against stress. Starter fertilizers can be a critical factor in getting any corn crop out of the ground and growing, especially when trying to maximize the value of growing 35,000 or more plants per acre. When selecting your seeding rate, there are at least four factors to consider:

1. Know the hybrid you are planting and how it responds to plant populations.
2. Know the water-holding capacity and/ or irrigation needed for maximum response.
3. Know the proper levels of phosphorous (P) and potassium (K) for your soils.
4. Know the competition factors and the stress levels these produce in your crop.

Weather is the "ugly" and you can't control it. You can however, impact how the weather affects the performance of a corn crop. Knowing your hybrid is essential because different hybrids react differently to heat and drought. You can manage disease-related leaf damage with a number of highly effective fungicides currently on the market. Tfhe positive effects of using fungicides are affected by hybrid, seeding rate, disease history of the field and other factors.

Wayne Crook, Agronomy Specialist