



Grain Crops Update

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Environmental Stress and Corn Management

A lot of our corn crop is now proceeding into the critical pollination stage. While it is very important to do our part to help the crop avoid stress, the basis for plant progression through reproductive development stages has already been established. Unfortunately, “mother nature” did not deal us a good hand this spring.

Crop management for the remainder of the season should focus on irrigation management for those with that capability, and pest management. Although the tasseling/silking period is when corn is most sensitive to stress, do not overlook that this crop is at least 50 days from physiological maturity and any stress during this time will limit productivity.

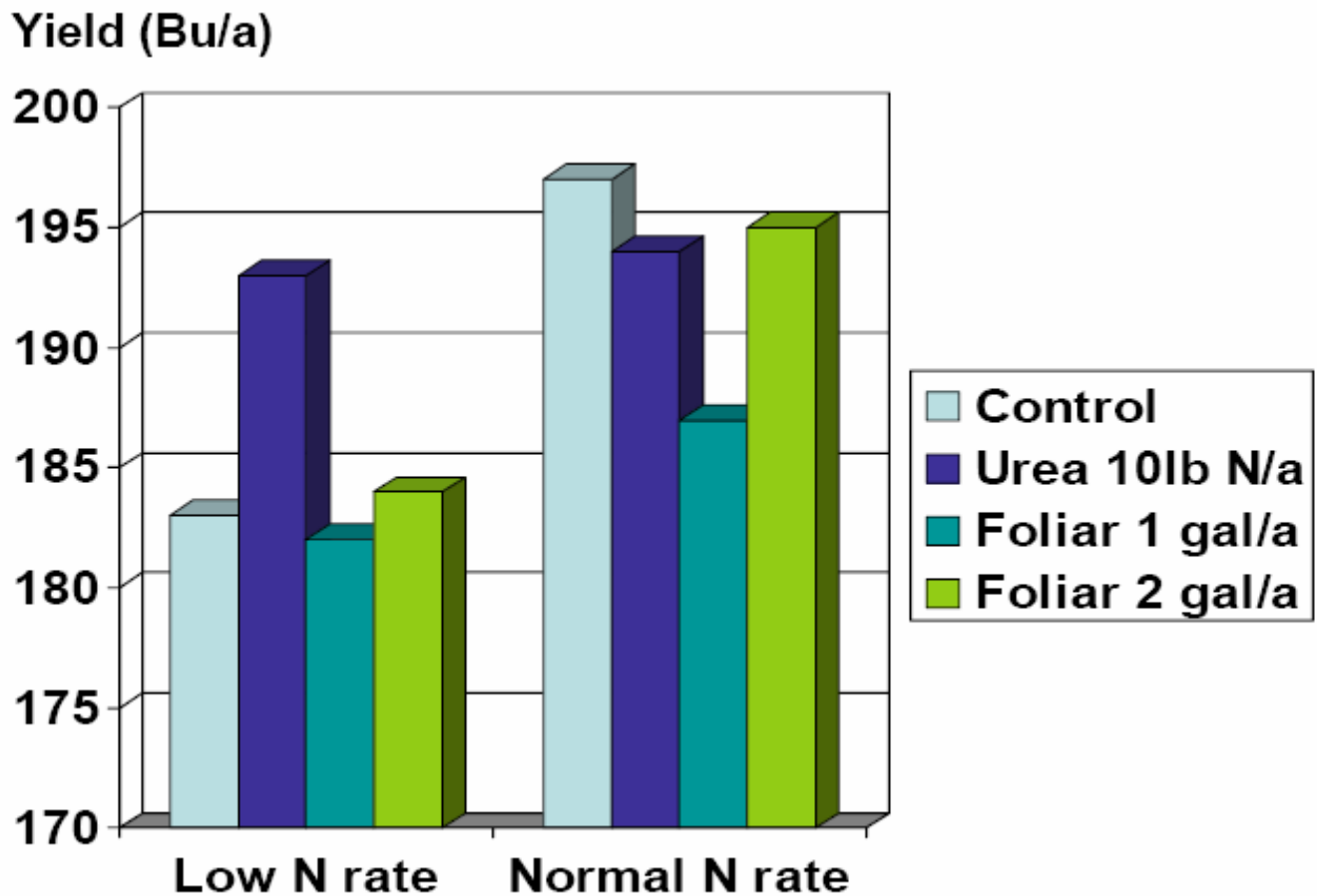
Figure 1. Some of our early-planted corn fields may be shorter than normal this year due to cool, saturated conditions during vegetative stages. There is not much we can do to recover yield potential. You should focus primarily on irrigation and pest management for the rest of the season.



Judicious crop scouting during the remaining 50+ days until physiological maturity can reveal specific problems for which we may make prudent and well-timed management decisions, paying big dividends at the end of the year. This is why we often advocate thorough, objective scouting, compared to automatic input treatments. Research in various areas has shown little or no response to popular pre-emptive inputs when the crop is not significantly threatened, particularly when these inputs are quite short-lived, relative to corn's reproductive stages. Regarding the use of foliar fungicides in corn, it is not that they will not work, but they don't stand much of a chance to help the crop by maintaining grain yield, stalk strength or other plant health traits, if disease does not threaten the crop during the time when the product is active.

Overcompensating for the environmental shortcomings thus far, may not prove effective long-term either. While the plants' root systems are likely far less extensive than optimum, substantially increasing furrow irrigation frequency will saturate soils for more time during the remainder of the season, and potentially reduce plant productivity, just like it did earlier this season. Over-fertilizing will not likely help either.

Figure 2. MSU research showing corn grain yield response to pre-tassel application of various nitrogen fertilizer sources. The figure shows outcomes when both normal and lower than normal nitrogen rates were previously applied. These results indicate corn may respond to substantial rates of urea, when intended nitrogen rates were not applied or substantial N loss occurs prior to tassel.



To add your address to the Corn and/or Wheat email list, please send a request to:
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