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Iowa Corn 2009 Outlook, as of August 1

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Abstract

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Keywords

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Iowa Corn 2009 Outlook, as of August 1

By Elwynn Taylor and Roger Elmore, Department of Agronomy

Iowa average corn yield in 2004 was 181 bu/acre (BPA), the highest ever recorded. Our assessment of current crop conditions and weather reports indicates that the 2009 corn yield can possibly be every bit as high.

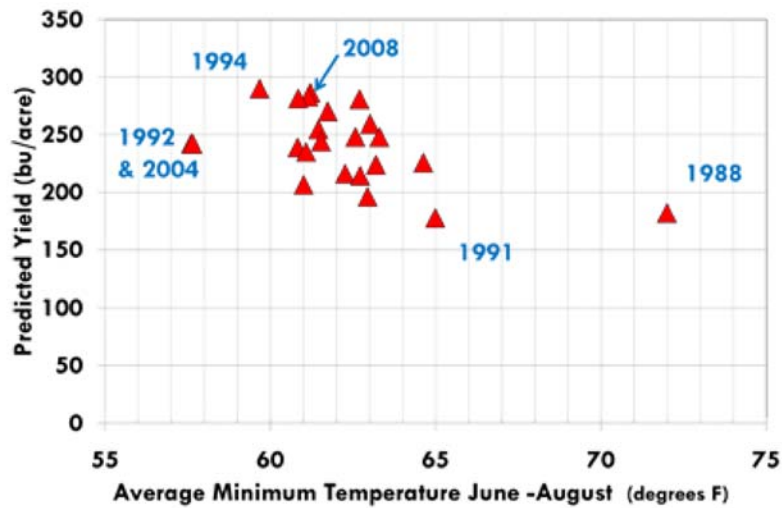
Historical data (since 1952) show that late planting reduces crop yield potential but cooler than usual temperatures from planting to silking have little definitive impact on realized yields. On the other hand, temperature from silking to R6, blacklayer, has a major impact. Higher than usual daytime – and nighttime – temperatures often bring on water stress and reduced yields (e.g. 1988). Warm night-time temperature even when day-time heat is not excessive tends to reduce yield by shortening the filling period. Cool night-time temperatures after silking are associated with the higher yielding years in Iowa.

Based on years with similar conditions through July as we have had this year, the chance of continued cool weather is more likely than a change to hotter than usual. The weather and corn yield estimation model “Hybrid-Maize” shows a strong relationship between night-time temperature and relative yield (see figure below - the model allows for comparisons over years with weather as the only variable). Much of the modeled impact on yield was related to cooler temperatures causing an extending of the period from silking to R6. Note: although the model shows a possible yield of 280 BPA this should be shifted to the reality of 2008 when the yield was 171 BPA (not 280 BPA). The model assumes all factors other than weather are perfect.

Our assessment is: the chance of having corn yields as good as 2008 is very real for Iowa this year.

Predicted Yield and Average Minimum Temperature

Ames, IA. - Negatively related, R = -0.53



* Yields predicted using Hybrid-Maize, Ames IA, 1986 -2008

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