



Grain Crops Update

April 17, 2009

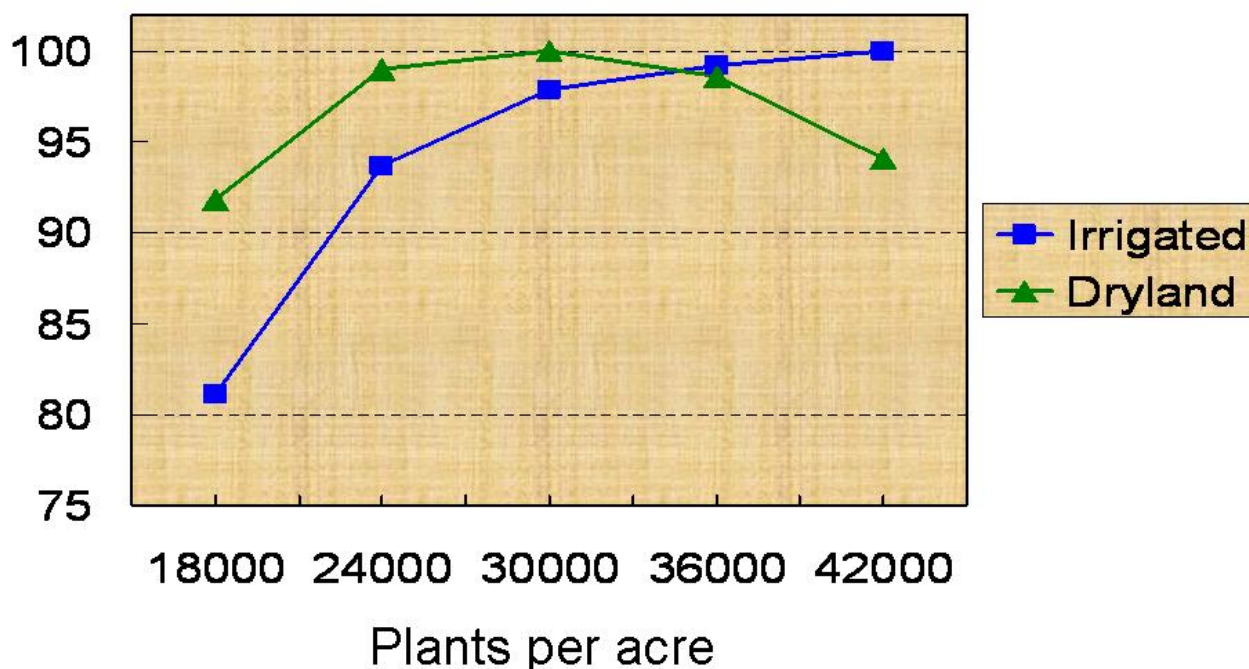
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Corn Replant / Late Planting Suggestions

Making corn replant decisions - Assessing corn fields for replanting purposes when stands are marginal depends on several key factors, including crop culture (irrigated or dryland), plant population, plant spacing uniformity (or lack thereof), and date relative to optimum planting date. Plant population research in Mid-South irrigated corn shows about 6-9% yield reduction for 24,000 plants per acre. Dryland research shows similar expectations down to about 18,000-20,000 plants per acre. However, stand problems in the field are likely going to reduce yield 10% or slightly more, because the stand reduction resulting from inclimate conditions and other factors, such as bird predation, will be uneven. Replanting much beyond the optimum window will not likely offset this yield loss or prove profitable, as yield expectations diminish with later planting.

Figure 1. MSU research summary of corn yield response to varying plant population in both irrigated and dryland production systems. Results reflect response of six corn hybrids over three years. Treatments in the study were planted to uniform stands, so corn yield reduction associated with uneven stand loss likely will be greater.

Yield (% of maximum)



Killing Failed RR Corn Stands - If you need to replant an incomplete stand of corn, it is absolutely imperative to destroy the remaining live corn plants with either tillage or herbicides. Replanting into a partial stand will produce severe “weed” competition between substantially older corn plants remaining from the initial planting and the replanted corn, significantly reducing yield potential.

Herbicide options for controlling failed stands of Roundup Ready corn include:

1. Select Max (6 oz/a) + 0.25% NIS + AMS: excellent control of RR or LL corn, can replant corn six days after application.
2. Gramoxone Inteon (40 oz/a) + a photosystem II inhibitor (Direx, Linex, Atrazine, or Simazine @ 16 oz/a; or Metribuzin @ 4 oz/a): good control of RR and/or LL corn when applied as specified with adequate coverage, no plant back restriction for corn.
3. Ignite (29 oz/a) – is not effective on Liberty Link (LL) corn hybrids, moderate control of RR corn, no plant back restriction for corn.

Late planting suggestions – Hopefully, we will get some dry weather to allow corn planting to proceed within the optimum planting dates, which extend to April 20 to 25 in north Mississippi. Productivity from later plantings is often much more inconsistent than early plantings, with considerable yield loss expected when droughty conditions, especially for dryland fields. Research generally indicates planting beyond the last optimum date will reduce yield potential about one percent per day, or slightly less (about 0.75% per day) with full irrigation or favorable mid-season growing conditions. I strongly recommend selecting well adapted, heat tolerant hybrids for late plantings. Medium to late-maturing hybrids generally perform better than early-maturity hybrids when planted late, because they were bred for climates farther south. Seeding rates can also be reduced 2000-4000 seeds/a at later planting dates, since warm temperatures enhance seedling establishment and produce taller, leafier plants, but are more likely to expose the crop to late-season drought stress, diminishing potential grain yield.

Figure 2. Yield potential likely will decline after optimum corn planting time passes. Therefore, you should be prepared to adjust hybrids and seeding rate when planting corn late. When replanting, it is essential to kill the remaining plants from the failed stand.



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