THE EFFECT OF LATE EMERGENCE ON CORN EAR SIZE AND YIELD

2016 Learning Center Demo Report
Monsanto Learning Center at Scott, MS

BACKGROUND

- Corn planting was difficult due to an extreme rainfall event in spring 2016.
  - Arkansas, Louisiana, and Mississippi growers reported extreme rainfall.
    - 10-28 inches during planting (mid March), and 3-6 inches (10-14 days later) during emergence and/or replanting.
  - For surviving fields and replanted fields the rainfall led to an extended corn emergence period.

STUDY GUIDELINES

- An experiment was established to evaluate the impact of late emergence on corn yield potential.
  - Corn plants within a field were selected and flagged as normal emerging or late emerging.
    - 46 pairs were flagged.
    - Corn was planted on March 29, 2016.
  - Ears were harvested, individually shelled, and weighed.

STUDY GUIDELINES

Figure 1. Late emerging corn plant flagged for evaluation.
Monsanto Learning Center at Scott, MS 2016.

RESULTS & DISCUSSION

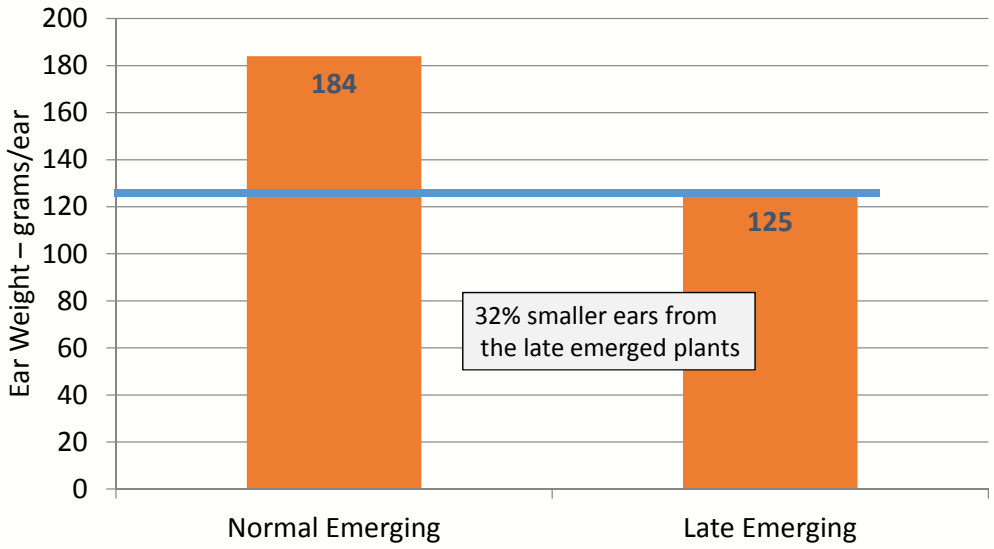

Figure 2. Emergence timing effect on ear size.

RESULTS & DISCUSSION

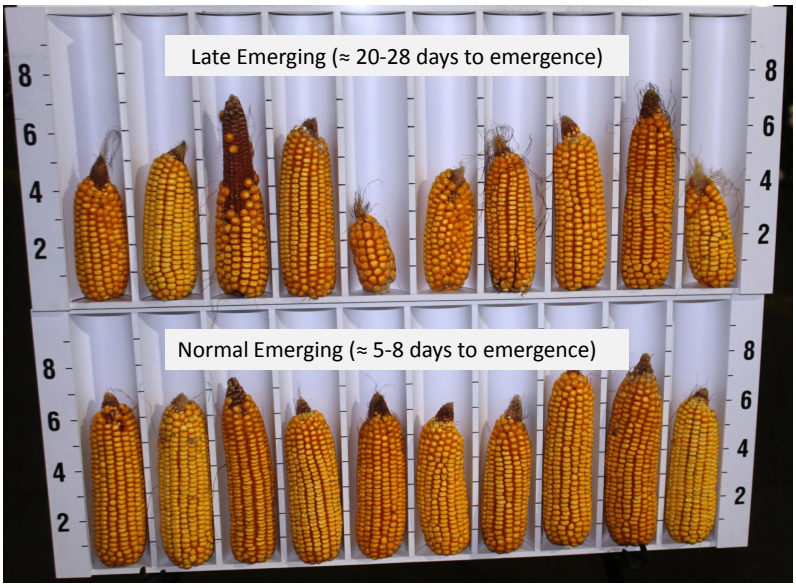

Figure 3. Ears from late emerging (top) and normal emerging (bottom) corn plants, paired comparisons. Monsanto Learning Center at Scott, MS 2016.

TAKE AWAYS

- Corn ears on late emerging plants pollinated, but were smaller than corn ears on normal emerging plants.
  - The difference in size may be related to two factors:
    1) Interplant competition from normal emerging plants.
    2) Difference in pollination synchrony between the normal emerging and late emerging plants.
- These data indicate that having a large number of late emerging plants could be a factor in deciding to replant when poor emergence conditions occur.
- When making replant decisions, evaluate each field for uniformity and quality of plants present.

LEGAL STATEMENTS

The information discussed in this report is from a single site, non-replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.