Replanting Options in DEKALB® Brand Corn Products

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

BACKGROUND

- The 2016 planting season presented many challenges in establishing corn crops and many growers were forced to replant, some more than once.
- Many difficult replanting decisions were faced by growers.
- This demonstration was designed to evaluate the effectiveness of several replanting options.

BACKGROUND

- Questions growers should ask include:
  - Should I replant into standing corn?
  - What is the advantage to destroying standing corn before replanting?
  - What is the impact of the maturity delay associated with replanting?
  - What is the yield potential of reduced corn stands?
  - This demonstration is an extreme case, but it ties in well with other Learning Center demonstrations from 2016 and previous years.

BACKGROUND

- The goal of this demonstration was to evaluate the replanting options available to growers. Options included:
  - Keeping poor stands
  - Replanting stands to appropriate populations
  - Supplementing substandard populations by planting into standing corn.

STUDY GUIDELINES

- Two DEKALB® brand corn products (DKC67-14 brand and DKC67-72 brand) were conventionally planted on March 29, 2016.
- Half of the plots were planted at 18,000 plants/acre.
- The other half of the plots were planted at 36,000 plants/acre.

STUDY GUIDELINES

- The following treatments were applied:
  - Keep 36,000 plants/acre
  - Kill original plants and replant 36,000 plants/acre on April 11, 2016
  - Keep 18,000 plants/acre
  - Kill original plants and replant 18,000 plants/acre on April 11, 2016
  - Replant 18,000 plants/acre when original plants reached the spike stage on April 11, 2016
  - Replant 18,000 plants/acre when original plants reached the 2-leaf stage on April 18, 2016
  - Replant 18,000 plants/acre when original plants reached the 4-leaf stage on April 25, 2016

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RESULTS & DISCUSSION

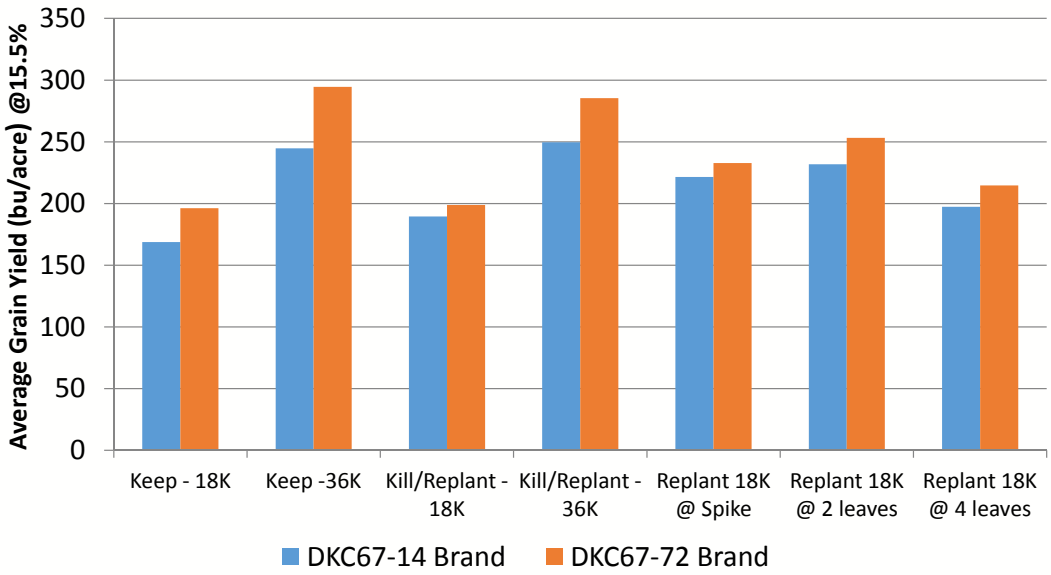

Figure 1. Results of replanting options with two DEKALB® brand corn products by treatment.

RESULTS & DISCUSSION

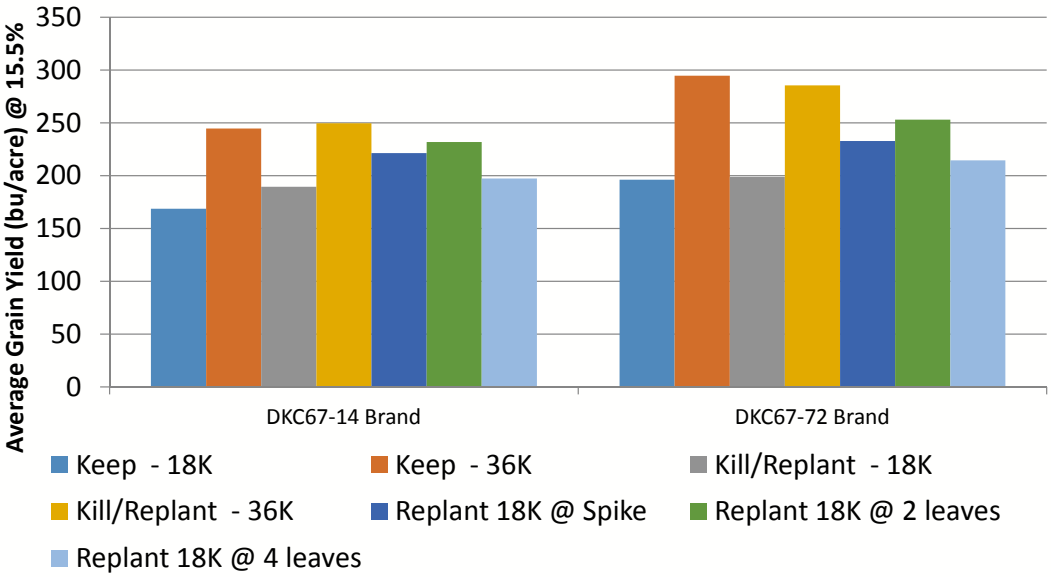

Figure 2. Results of replanting options with two DEKALB® brand corn products by corn product.

RESULTS & DISCUSSION

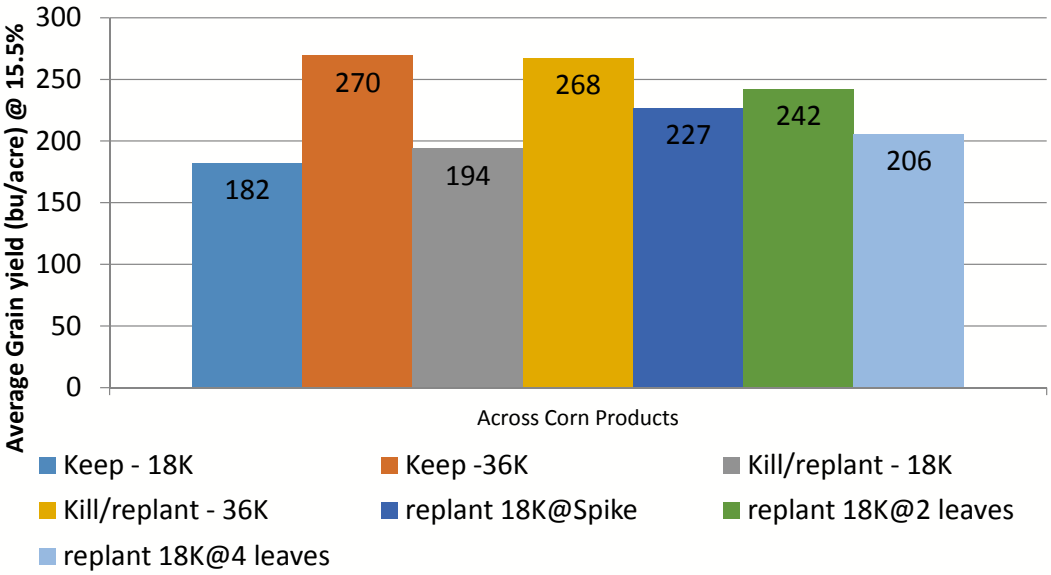

Figure 3. Results of replanting options with two DEKALB® brand corn products across corn products.

RESULTS & DISCUSSION

- No penalty in yield was measured when comparing the first planting date to the replanted date at either the 36,000 or 18,000 plants/acre planting rate.
- The 18,000 plants/acre planting rate yielded, on average, 30% (81 bu/acre) less than the 36,000 plants/acre treatment across both corn products. This is $200.00+/acre net gain.
- Planting into standing corn produced slightly better yields than keeping a substandard population but did not have the yield potential of the cleanly replanted corn at either population.
- Averaged across the “planting into three standing corn” treatments, the “destroyed and replanted” treatments yielded 16% (43 bu/acre) more when starting over clean. This is a net gain of close to $100.00 per acre.
- Results from this demonstration indicated that DKC67-14 brand should not be planted at populations this high due to concerns about standability.

TAKE AWAYS

- Starting clean (first plant or replant) is a good idea, even with the associated maturity delay.
- Longer replant delays would likely cause some decrease in yield potential due to several issues including heat-induced pollination problems, heat during grain-fill, and late-season weather events that could induce lodging. This should be carefully factored into the replanting decision.
- This demonstration indicated that, if corn fields have questionable stands, replanting should be seriously considered.
- The worst option was to keep substandard populations, closely followed by replanting into standing corn without destroying the existing plants.
- In short, if you think you have an issue in a corn field, you're likely correct, you do.

LEGAL STATEMENTS

The information discussed in this report is from a single site, non-replicated demonstration. This information 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.