



Yield Response of Asgrow[®] Brand Soybean Products to Multiple Planting Dates

2017 Learning Center Demo Report
Monsanto Learning Center at Scott, MS





BACKGROUND

- This demonstration was conducted to evaluate the yield response of a wide variety of Asgrow[®] brand soybean products to planting dates. For several reasons, information of this type is currently in demand. Soybean production in the midsouth has seen shifts in maturity groups (MG) planted.
 - Until the early 1990s, most southern soybeans were MG 6 and MG 7 planted in late May, June, and July.
 - Starting in the early 1990s, a shift began to the Early Planted Soybean Production System which consisted of MG 4-5 soybeans planted in late March, April, and May.
 - This shift resulted in nearly a doubling of soybean yields across the midsouth.
 - The typical midsouthern system today is MG 4-5 soybeans planted from April 10th – May 20th.
 - Little work has been done with early soybeans planted later in the cycle. This demonstration was conducted to determine the impact on yield potential of multiple planting dates.



BACKGROUND

- **Five scenarios and potential outcomes:**
 - **Early soybeans (MG 3 and earlier) planted early (early April)** typically bloom very early due to photoperiod and do not develop adequate height for good yield potential.
 - **Mid-maturity group soybeans (MG 4.5-4.6) planted mid-season (early April)** offer the optimal compromise in height vs. yield potential as dictated by the bloom period.
 - **Late soybeans (late MG 5 to early MG 7) planted early** will typically be too tall before bloom and will suffer reduced yield. This is not done commercially.
 - **Early (MG 2-3) soybeans planted late (May 1 or later).** The primary purpose of this study was to evaluate these MGs. The theory is that these soybeans will bloom early but be growing fast enough, due to heat at later planting, that they achieve adequate height and node counts to yield at commercially acceptable levels.
 - **Late soybeans (MG 5) planted late (May 1 or later).** This is the historical standard. This scenario typically results in reduced yield potential and increased weather/insect susceptibility vs. earlier planted soybeans.



BACKGROUND

- **OBJECTIVE:**
- Conduct preliminary evaluations of whether there is an option to shift soybean maturity groups toward earlier soybeans planted later in the cycle while maintaining acceptable yield potential.
- This shift could help in two ways:
 - Mitigating weather risks
 - Reducing insect damage, particularly from red banded stinkbug, which is an emerging midsouthern issue.
- Evaluate yield penalties associated with the above described shift.



STUDY GUIDELINES

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield	Planting Rate
Scott, MS	Silt Loam	Corn	Conventional	Various	Various	100 bu/acre	140,000 seeds/acre



STUDY GUIDELINES

- Planted in 7.5-inch x 38-inch twin rows
- 140,000 seeds planted/acre
- All agronomics were per local standard.
- Planted on:
 - 3/22/17
 - 4/17/17
 - 5/22/17



STUDY GUIDELINES

- **Asgrow[®] brand soybean products planted:**
 - AG005X7 brand
 - AG03X7 brand
 - AG17X7 brand
 - AG25X6 brand
 - AG32X6 brand
 - AG38X6 brand
 - AG42X6 brand
 - AG43X7 brand
 - AG46X6 brand
 - AG53X6 brand
 - AG59X7 brand



RESULTS & DISCUSSION

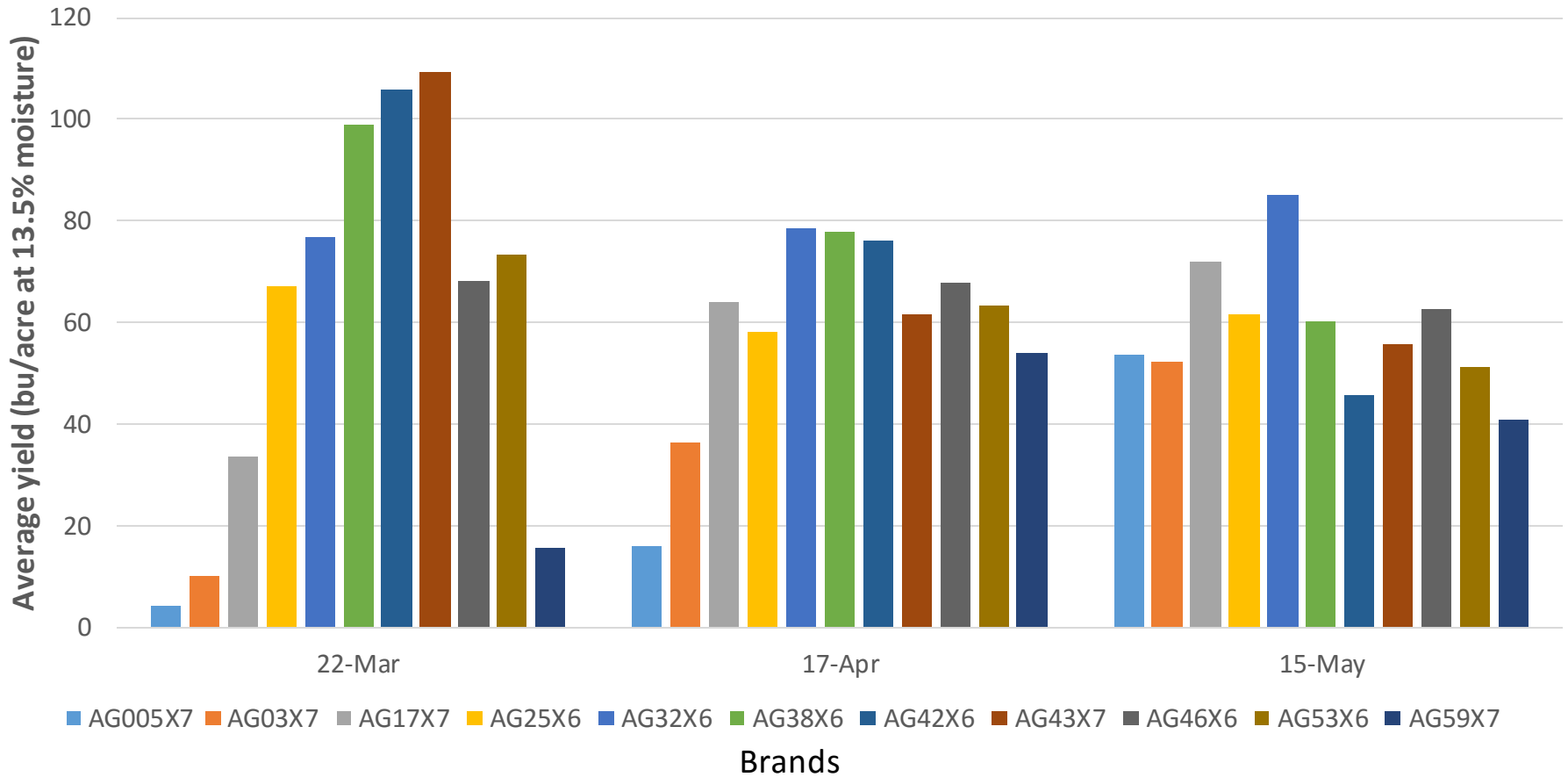


Figure 1. Average yield response of Asgrow® brand soybean products by planting date.



RESULTS & DISCUSSION

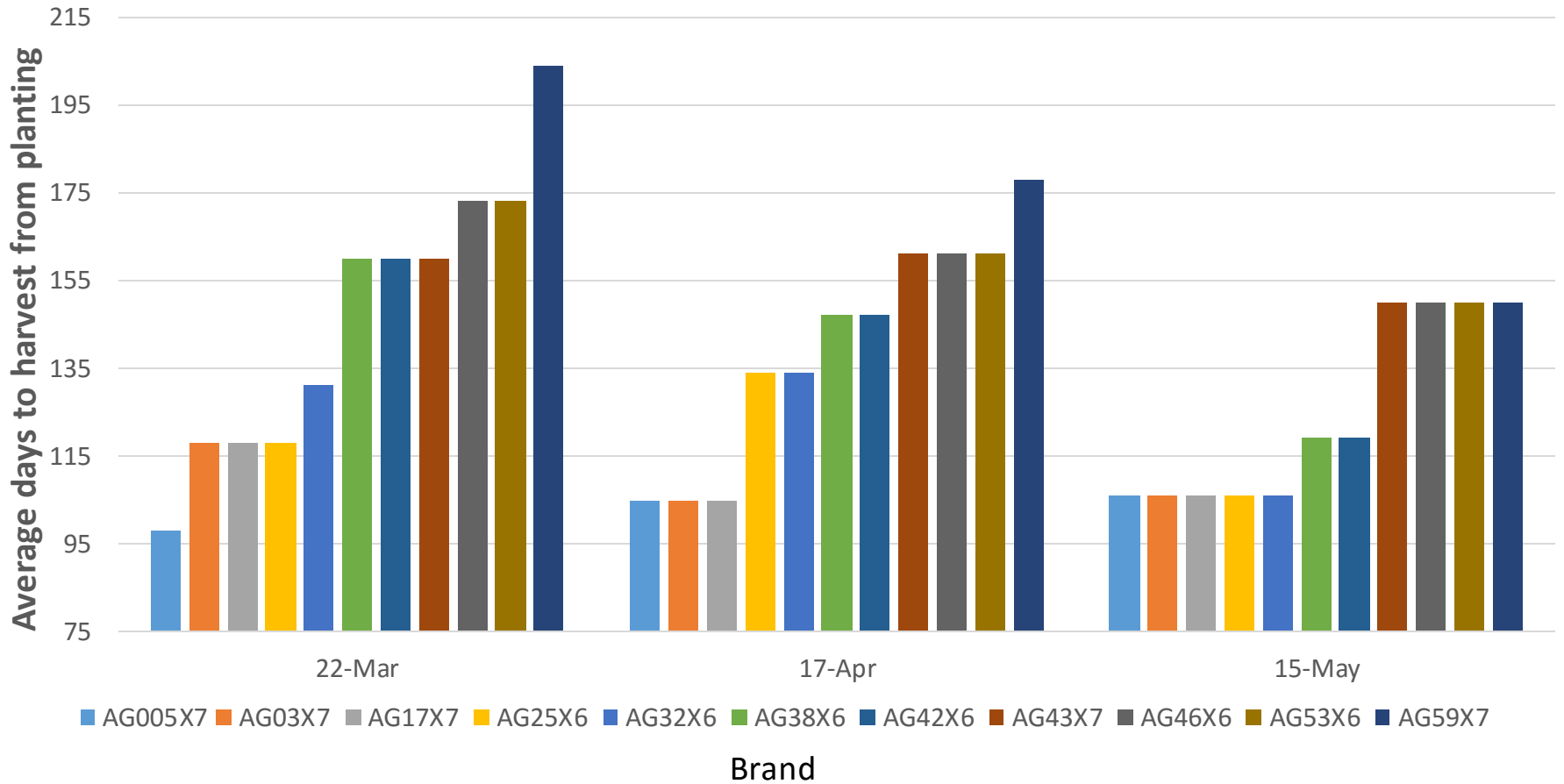


Figure 2. Average days to harvest of Asgrow® brand soybean products by planting date.



RESULTS & DISCUSSION

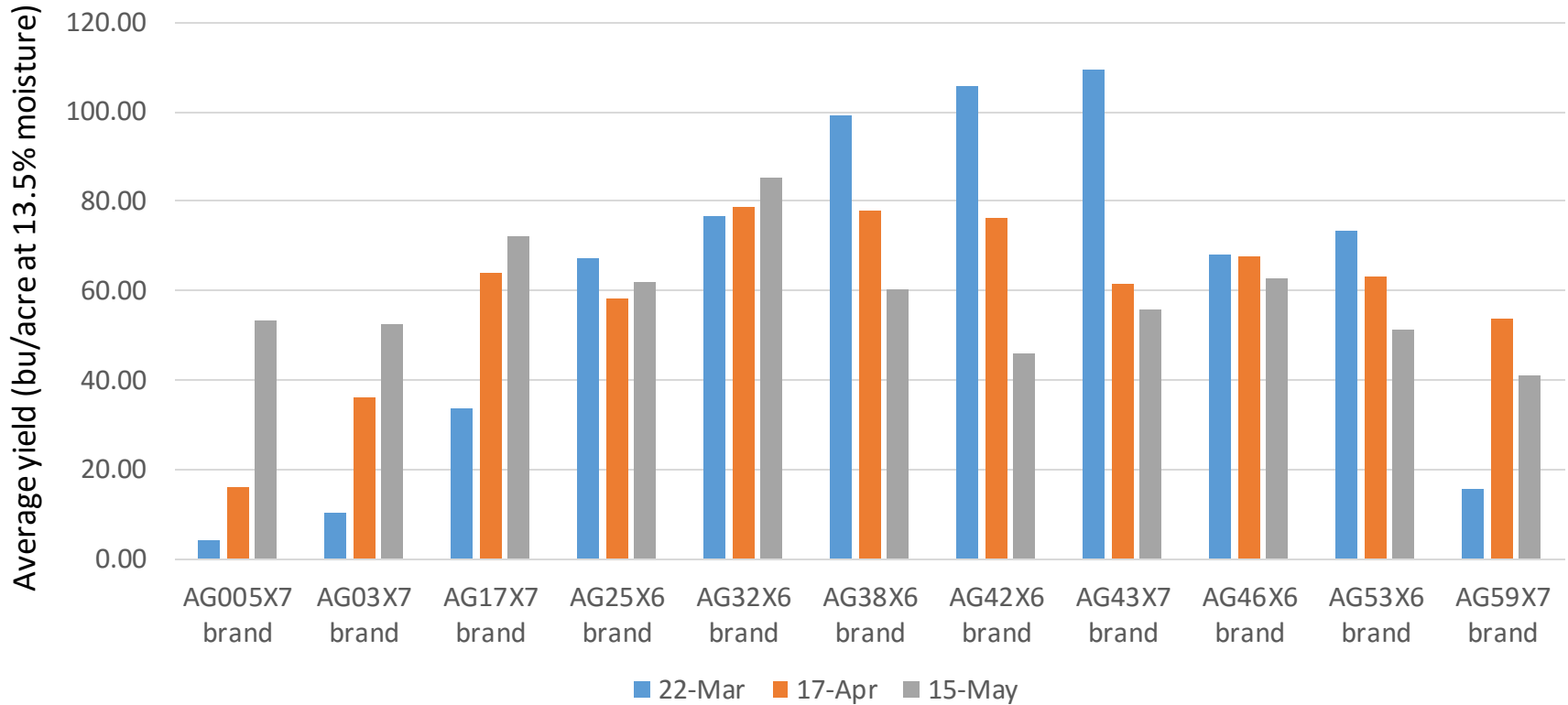


Figure 3. Average yield of Asgrow® brand soybean products by planting date.



TAKE AWAYS

- This demonstration should be viewed cautiously but does present the extremes of the case.
- It appears that some potential exists to shift toward earlier maturity soybeans in later plantings without significantly decreasing yield potential.
- Significant unknowns exist in trying this type of production commercially. Disease susceptibility and local adaptation are two of the largest risks. Most, if not all, of the radically early soybean products tested here have not been tested in the southern US.
GROWERS SHOULD PROCEED CAUTIOUSLY!!!!
- Asgrow[®] and local agronomists plan to test soybean products in a similar system in 2018.



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.

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THANK YOU

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