



The Response of Several Asgrow[®] Soybean Products to Simulated Hail Damage

2014 Learning Center Demo Report
Monsanto Learning Center at Scott, MS



Study Purpose



- Hail damage in soybean can decrease yield potential, but there are many factors to consider prior to making a replant decision.
- A demonstration trial was conducted to:
 - Determine how different plant populations compensate for terminal damage.
 - Evaluate yield response of four different Asgrow[®] brand soybean products to simulated hail damage.
 - Establish an average yield reduction for keeping rather than replanting damaged plants.

Background



- A similar demonstration trial completed in 2013 at the Monsanto Learning Center in Scott, MS resulted in the following observations:
 - Lower plant populations can compensate more than higher populations.
 - Moderate hail damage prior to pod fill does not significantly affect yield potential.

Study Guidelines



- A demonstration trial was planted April 24, 2014 at the Monsanto Learning Center in Scott, MS.
- Four Asgrow[®] soybean brands: AG4232, AG4632, AG4633, and AG5332 were planted at seeding rates of 90,000, 120,000, and 150,000 seeds/acre using standard agronomic practices.
- A flail mower was used to simulate hail damage. Soybean plants were mowed to the point that terminal dominance was lost. This resulted in the top 15 inches of the plant being damaged.
- After hail treatment, crop was managed as normal.

Study Guidelines



On left, flail mower simulating hail damage by damaging top 15 inches of soybean plants, and on right, plants exhibiting terminal damage after hail treatment.

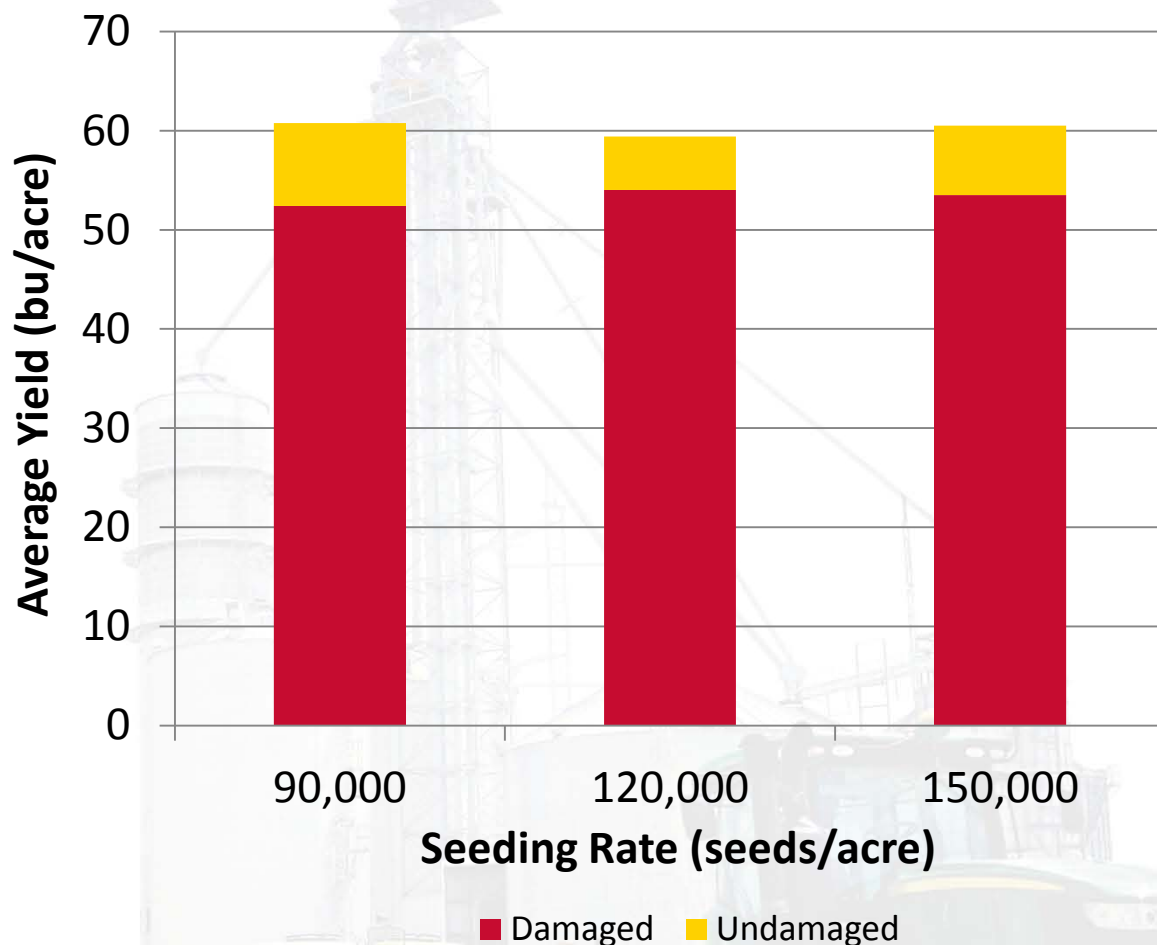


Results and Observations

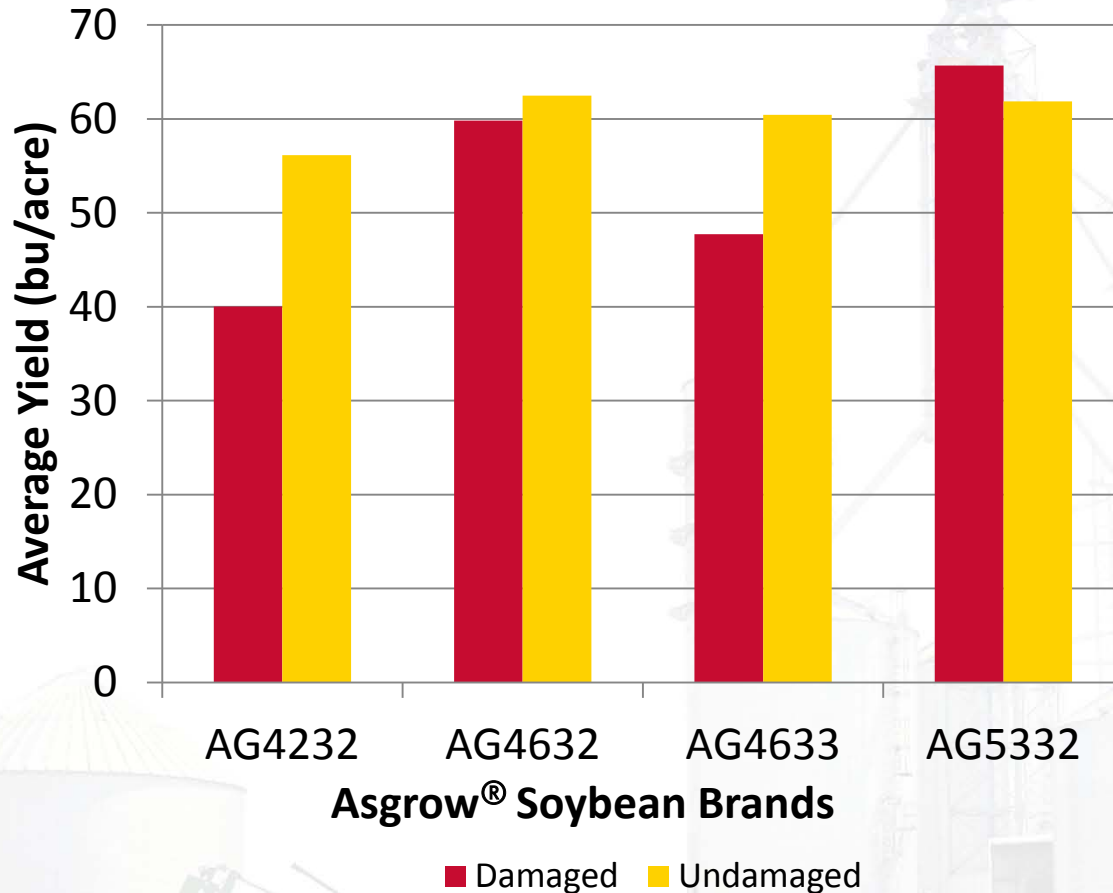


Plant Population

- Seeding rate did not impact average yield in either damaged or undamaged treatments.



Results and Observations



Soybean Product Average Yield Response

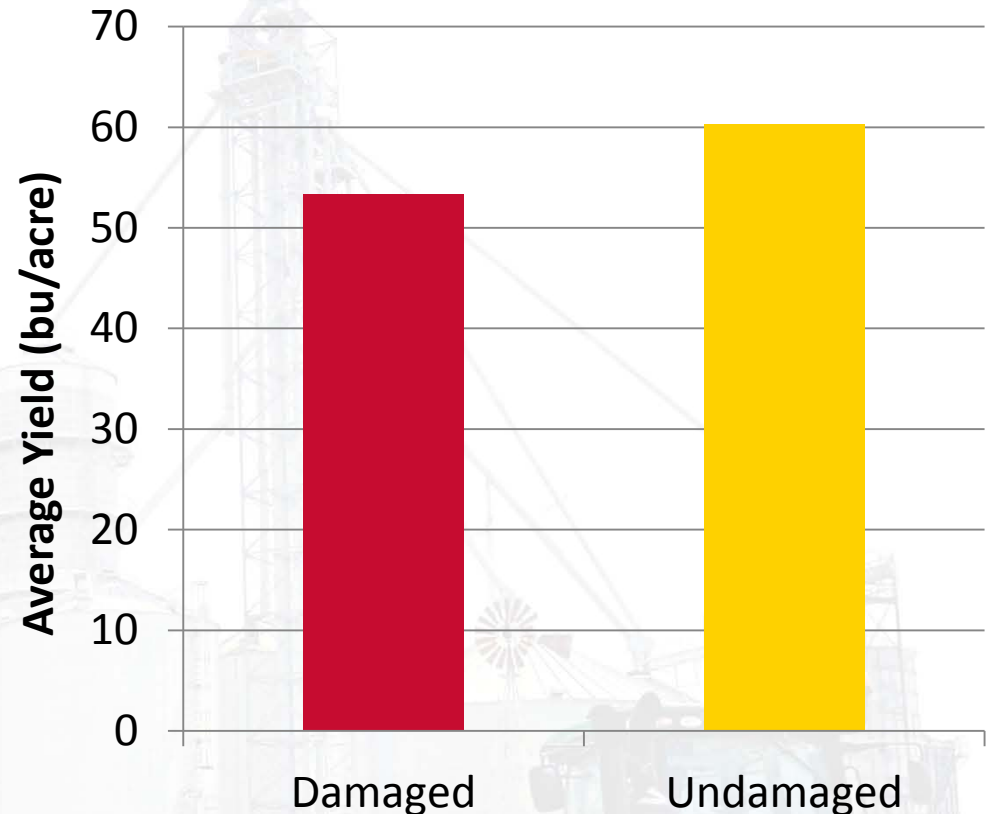
- Soybean products responded similarly to damage.
- One product, AG5332 brand, had a higher average yield when damaged, but without an appreciable yield difference.

Results and Observations



Hail Yield Reduction Average

- Across all soybean products and populations, damaged soybeans yielded an average of 7 bu/acre less than undamaged soybeans.
- Soybeans have a great ability to compensate for potential yield loss if damage occurs prior to pod fill.



Key Messages



- Unlike the study in 2013, this study did not find a higher average yield compensation in lower plant populations.
- Moderate hail damage, although severe in appearance, may not constitute a need to replant.
- Soybeans have a great ability to compensate for potential yield loss if damage occurs prior to pod fill.
- Lastly, in this demonstration trial, damage to soybean terminal did not provide an opportunity to increase yield potential.



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