



Seeding Rate and Row Width Recommendations for Ohio Soybeans

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INTRODUCTION:

As soybean seed costs increase, there is a need to re-evaluate seeding rate recommendations. Previously established seeding rate recommendations do not account for new plant varieties, improved cultural practices, and precision planting equipment.

EXPERIMENT 1

The experimental design for the small-plot research was a split-plot, randomized complete block with four replications of treatments. The main plot factor was row width and the subplot factor was seeding rate. Soybean stand counts were conducted shortly after planting and just prior to harvest.

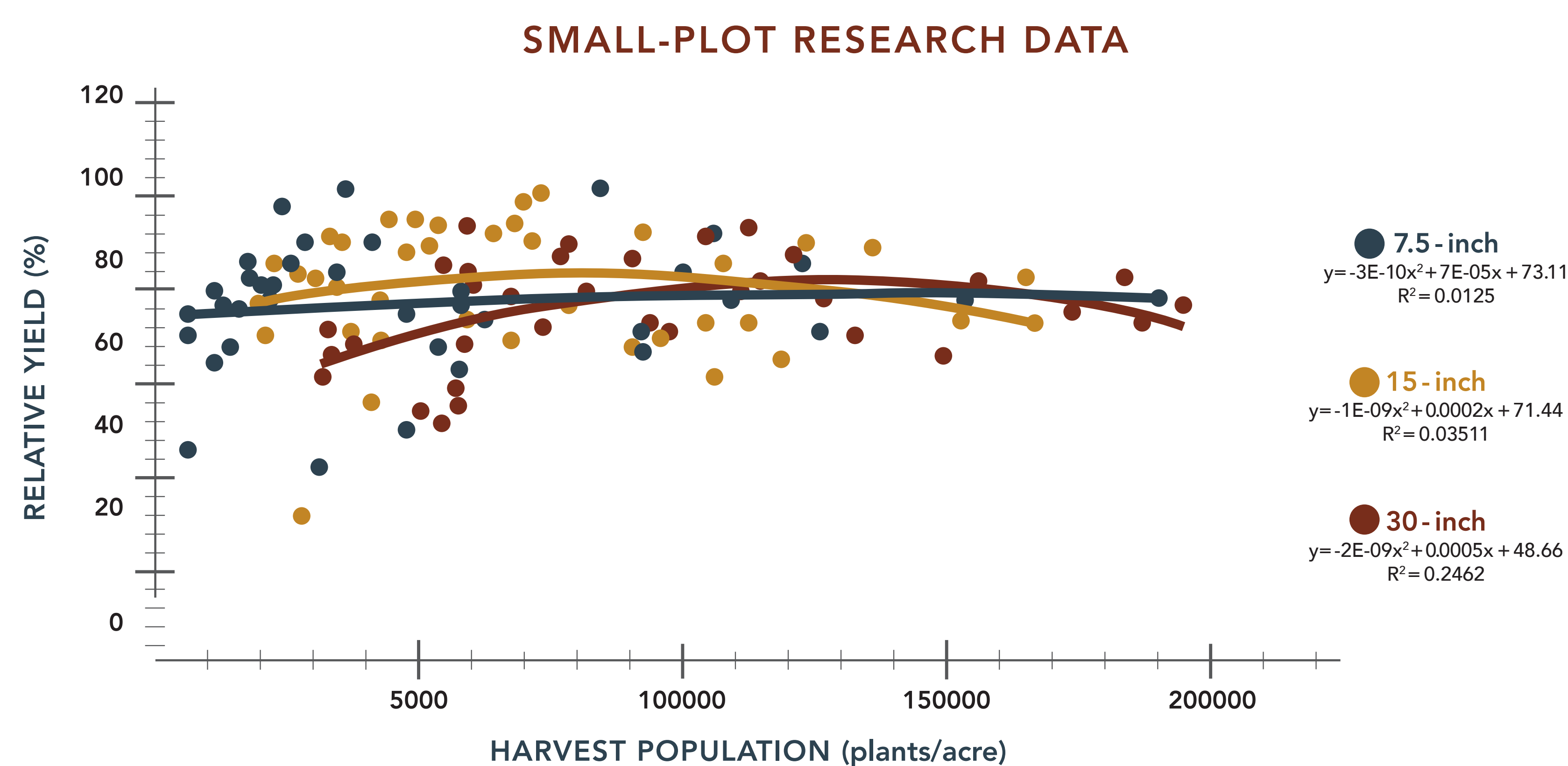


FIGURE 1. Target harvest populations for all 3 row widths. The trend shows harvest populations plateau around 125,000 plants/acre. The field trials were located in Custar, OH and Wooster, OH.



7.5" rows in small-plot



15" rows in small-plot



30" rows in small-plot

EXPERIMENT 2

- The on-farm strip trials consisted of 4-5 seeding rates ranging from 60,000 to 235,000 seeds/acre with 3 to 4 replications of treatments.
- There were five on-farm strip trials conducted in 2014 in Fulton and Darke County, Ohio.

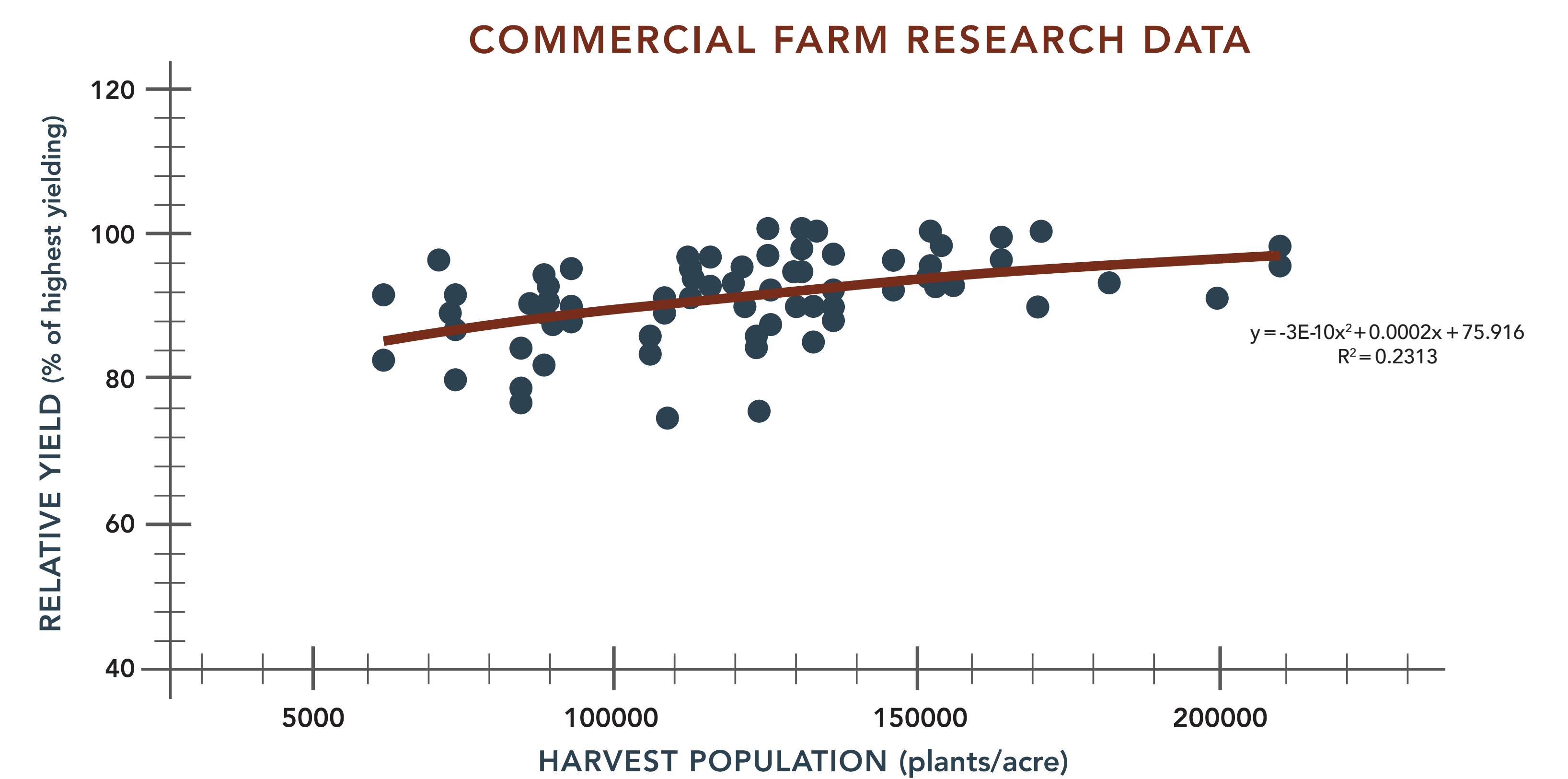


FIGURE 2. Relative yield responds positively with increasing harvest populations at 15 inch row width. 90% relative yield is achieved at 101,900 plants/acre. The field trials were located in Fulton County, OH and Darke County, OH.



140,000 seeds/acre on-farm strip trial



140,000 (left) and 165,00 seeds/acre (right) on-farm strip trial before harvest



Harvesting of on-farm strip trial

RESULT

Grain and yield were adjusted to 13% moisture. A quadratic model was fit to the yield data and indicated that 90% relative yield was achieved when there were 101,900 soybean plants/acre at harvest.

Preliminary results indicate that farmers in Ohio are planting more soybeans than necessary to maximize yield.

