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Building a better bean: It will take a community that thinks big

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Soybean (*Glycine max* (L.) Merr.) is desired for its high value protein and oil, which is deposited at levels approximately 40% and 20%, respectively, in seed. Like all crops, soybean production is governed by two components, the agronomic practices employed during the season and the genetics of the seed sown. Technological advancements that address these components will be critical to ensure continuous improvements in yield, protection of yield and quality of the seed in the future. Innovations in aspects of precision agriculture and synthetic biology coupled with ongoing efforts in genomics, phenomics and computational tools hold great promise to address the goal of building a better bean. In regards to the genetic component of soybean production, future directions will continue to target on two areas, yield and quality. Gains in these two broad targets will require a greater understanding of the genetic underpinnings controlling carbon capture and flux *in planta* throughout development. Research efforts in areas that address improvements in photosynthesis, at both plant and canopy levels, and subsequent flux of assimilates from source to sink, need to be strengthened. Such efforts will translate to improved mechanistic flux models, which in turn, will help guide hypothesis testing in soybean breeding programs introgressing novel sources of genetic variation addressing the identified bottlenecks in the derived assimilate flux maps. The outcomes of such research activities will lay the foundation for improved germplasm suitable for cultivar development for both commodity and high-value identity preserved soybean for the marketplace. Importantly, such research endeavors require transdisciplinary approaches, which will mandate the next generation of scientists possess a solid disciplinary research focus complemented with diversified, interdisciplinary, team-based training.