The Kansas State University 2015 BAE Robotics Team won the American Society of Agricultural and Biological Engineers’ annual student robotics design competition for the ninth year in a row. The event took place at the society’s annual meeting in New Orleans with the aim of encouraging undergraduate and graduate students to develop innovative robotic solutions to real-life problems in agriculture.

Automated plant phenotyping — where breeders identify the behavior of plants under certain conditions and determine which plant strains are best suited for those conditions — was the focus of the competition. Student teams constructed fully automated robotic systems designed to simulate the assessment of soybean plants in the field. Each system had to collect and deliver samples of all detected phenotypes in the field, requiring it to identify plants by color and height, and deliver them to a reporting station. The “field” was an 8-by-8-foot board with specially made pieces to represent the plants. Teams earned points for accuracy in phenotype detection and collection, and for elegance and creativity.