SOYBEAN RESEARCH PRINCIPAL INVESTIGATOR PROFILE — PENGYIN CHEN

Farmer Blog

In memory of Dr. Chen (September 28, 1957–August 1, 2022)

Pengyin Chen, University of Missouri, David M. Haggard Endowed Chair Soybean Breeding and Genetics

Why did you decide to pursue a career that includes soybean research?
I got involved with soybean research because soybeans are the second largest agricultural crop in the United States and the most important source of protein and oil.

What research topic have you completed in the past or are working on now that could have or has had the most significant impact on soybean production?
My research focuses on soybean cultivar development and germplasm enhancement. Our breeding program covers a wide range of important traits including yield, disease resistance, broad adaptation, improved seed compositional attributes, and tolerance to drought, flooding, and salt. We also are developing value-added soybean lines with specialty attributes for the food and feed markets. We have developed and released 25 conventional, seven Roundup Ready, three high oleic and 15 food-grade varieties, along with 12 germplasm lines with specialty traits.

How has the soybean checkoff enhanced your ability to find answers to production problems for farmers?
The soybean checkoff program has provided necessary funding support for our research and development effort. Without such support from farmers, research wouldn't be possible, and our breeding program would not be so productive and successful.

Within your area of expertise, what are the top two or three general recommendations you would offer farmers to improve their management practices?

1. *Use proper crop rotation to sustain soil health and help control weeds and pests.*
2. *Diversify soybean genetics, varieties and new technology to avoid crop vulnerability to herbicide-resistant weeds.*
3. *Incorporate value-added products to improve your profits from soybeans.*

Within your area of expertise, what do you consider to be critical soybean research needs that can impact the profitability of farmers in the future?
Soybean research in the future should focus on genetic gain and continued yield improvement, the soybean defense package, including disease, insects and environmental stress, so yield can be protected, and new and improved traits and products that add value to soybean production.

SOYBEAN RESEARCH & INFORMATION NETWORK

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