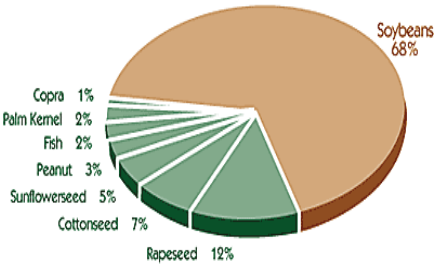
Soybeans are unique in providing high levels of high quality seed protein and oil. As the global demand for both protein and energy continues to increase, the industry recognizes exciting opportunities and serious responsibilities. In 2006, 68% of the protein meal consumed globally was soy. USDA projects that most of the gains in demand for soybean meal will be for human consumption in developing countries. Oil demand will be led by human consumption in Asia, followed by increased consumption in the EU-27, attributable to biodiesel production.



In light of these figures and projected lower production, *the overarching research priority for the U.S. soybean industry is to translate the vast amount of data generated from sequencing the soybean genome (as well as from model and other species) to technological innovation in the efficient production and quality of soybean for the good of the environment, the U.S. economy, human health globally -- and for U.S. farmers.*

Translating basic research into applications – soybean production

The soy industry continues to work with researchers in all sectors to develop research roadmaps that define strategic goals for improving production efficiency and soybean quality. In 2007, fifty experts from a wide range of disciplines identified five year objectives and resources needed to improve the quantity and quality of U.S. soybean production.[1] The soy research community - academic and governmental - continues to work strategically to use industry and government resources efficiently and effectively.

Translating basic research into applications – alternative diets for aquaculture

Globally, aquaculture is the fastest growing food production system. As an unprecedented number of species are domesticated,[2] there are opportunities to bring new knowledge and genomics tools to bear on issues surrounding domestication – including the tools of nutritional genomics to hone feed efficiency, minimizing waste and optimizing nutritional value of plant feedstocks. USB has supported the development of a strategic research plan that identifies the research needed to optimize plant-based diets for marine finfish.[3] To fulfill the global demand for nutritional alternatives to fishmeal, the U.S. soybean industry is recommending that CSREES implement a $10 million competitive program with the goal of expediting the development of nutritious, sustainable diets for aquaculture production through the integration and translation of both fish and plant genomics.

Translating basic research into applications – developing the tools of translation

Transcending crop-specific interests is the need to develop the tools to translate knowledge gained from genomics research and resource development to crop improvement. The tools to jump the translation gap – diagnostics, statistical inference and decision support systems – are being developed to translate understanding of the human genome to treatments and therapies. This work can inform the development of translation tools for use in agricultural species. The soybean industry looks forward to working with other crops across federal agencies to develop translational tools for the benefit of all crops.

✓ ***The arrival of soybean rust in the fall of 2004 set in motion an unprecedented coordinated effort of education, research, monitoring, and information distribution. The Pest Information Platform for Extension and Education (PIPE) was developed to provide electronic access to data on soybean rust. Continued funding for PIPE is a high priority for the soybean industry as well as to the environmental and economic health of rural communities.***

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[1] http://www.csrees.usda.gov/nea/plants/pdfs/soybean_genomics.pdf
[2] Duarte et al, *Science* 20 April 2007 316: 382-383
[3] http://www.aquafeed.com/ppa-resources.php?site=all&typeid=17

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