

Poultry Production & Processing for a Resilient Future

Issue: While the poultry industry has a strong tradition of embracing innovation, much of this has been in incremental changes to traditional processes. Poultry production and processing has not changed fundamentally since the end of World War II. While significant improvements have been realized in many of the production and processing subsystems, we are still producing chicken using the same general approach that was adopted over 60 years ago.

Over the last 20 years the poultry industry has come under significant pressure in a variety of areas including, food safety, animal welfare, environmental impact, and labor safety/availability. The traditional method of “tweaking” current processes to meet these new demands is not a long term strategy for ensuring the viability of the poultry industry. Instead, new out-of-the-box approaches are needed, where implications or methods/designs across the entire production/processing chain are considered. This effort seeks to provide a framework for rethinking the entire chain in highly collaborative, systems based fashion that sparks significant transformative innovation.

What has been done:

Phase 1: Build the Core Team & Meet the Customer

A concerted effort has been made to connect with the major Poultry Science departments in the various academic institutions across the country. This included participating in a US Poultry meeting of the various Department Heads and extension coordinators to begin the discussion about an Advanced Poultry Production and Processing Research Program. In addition, a visit to the USDA NIFA program office in DC was conducted to plant the idea and market the concept and need for such a research initiative.

Phase 2: Develop the Concept

Several smaller workshops and focus groups were convened with key members of the poultry community from several institutions to discuss the general framework for the effort. The broad challenge was summarized as – “what will the production and processing plant of the future look like?” Specifically, the group sought to identify the key challenges and mechanisms for stimulating innovation to address these challenges. A working draft of a white paper was generated and served as the basis for some further discussions with the USDA NIFA program managers. Discussions were also initiated with the System-of-Systems modeling researchers at Georgia Tech for consideration as a platform for managing and modeling poultry production. A letter of intent was submitted to the USDA call on Food Safety, but was not considered to meet the objectives for the program. A one page white paper on the concept of a distributed research program focused on the future of poultry production and processing was drafted for circulation among Washington legislators for consideration in the Farm Bill.

Phase 3: Enlarge the Circle of Participants

During this phase of the project, the goal was to begin building a larger coalition of participants. This involved have more individual conversations with key academic and industry stakeholders, and presenting them with the concept of a larger distributed but collaborative effort. As part of these activities, a symposium at the Poultry Science Association Annual Meeting was held to discuss and present ideas on the future challenges of poultry production and processing. Presentations were given to various faculty groups to stimulate ideas and concepts for research and to engage a broader audience. This component of the effort is ongoing, with recent discussions at two other universities and at the summer leadership meeting for two different state poultry associations.

Impacts/New Partnerships:

This effort has had the benefit of bringing together a broad group of researchers and professionals that have begun to think about the future challenges to poultry production and processing. It has provided an opportunity to discuss the role of innovation in agriculture in general and for the poultry industry in particular. The partnerships between academic institutions have been strengthened, and the partnerships with industry and trade associations have been forged.

Outcome of Project (societal impact/ measure of increased quality of life)

The future of poultry production and processing in North America will depend directly on our ability to innovate and adapt. As a very conservative industry that is tightly regulated, the culture and environment that fosters innovation and creative thinking has been lacking. The primary outcome of the project has been to instill a new perspective on transformational innovation, and how the academic institutions can take more active roles in developing new methods, materials, processes, and technologies that could have significant impacts in the future. The landscape is shifting. With more emphasis being placed on environmental impact, animal welfare, food safety, and labor it is critical that the research community rapidly embrace opportunities to innovate and provide clear and tangible solutions for resilient future.

How has your project been aided by your FSLI experience?

The leadership training, the coaching, and the encouragement to pursue big ideas has been an invaluable benefit of the FSLI experience. The networking with other academics and researchers and the leadership development activities have been very empowering.

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