

Emerging Issues: Social Sustainability of Egg Production Symposium

Introduction—The Socially Sustainable Egg Production project

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ABSTRACT The social and political pressure to change egg production from conventional cage systems to alternative systems has been largely driven by the desire to provide more behavioral freedom for egg-laying hens. However, a change of this magnitude can affect other components of the production system and may result in unintended outcomes. To understand this issue, a Socially Sustainable Egg Production project was formed to 1) conduct a holistic and integrated systematic review of the current state of knowledge about various

aspects of sustainable egg production, and 2) develop a coordinated grant proposal for future extramural funding based on the research priorities identified from the review. Expert study groups were formed to write evidence-based papers in 5 critical sustainability areas: hen health and welfare, economics, food safety and quality, public attitudes, and environmental impacts. These papers were presented as the PSA Emerging Issues Symposium on Social Sustainability of Egg Production at the 2010 Poultry Science Association meeting.

Key words: social, sustainable, egg production

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INTRODUCTION TO THE SOCIALLY SUSTAINABLE EGG PRODUCTION PROJECT

The laying hen industry has been under intense social pressure for at least a decade to change or prohibit certain production practices and adopt alternative production systems (Thompson et al., 2007; Swanson, 2008; Mench et al., 2011). Most criticism has focused on the use of conventional cages, primarily because they restrict hen behavior. However, changes in production systems meant to address a single issue can have unintended consequences with respect to other impacts of those systems. To date, no systematic study had been carried out in the United States to provide a holistic evaluation of the potential short- and long-term effects of the proposed production changes on hen health and welfare; supply chain dynamics; the economic impact on consumers; food safety, security, and quality; vulnerability to food bioterrorism; human health; and sustainable ecological practices.

Just as problematic as this lack of evaluation is a lack of trust, civil discourse, and common ground be-

tween the industry and an animal protection sector that claims to represent the public interest. Although the views of egg consumers and the public in general should obviously play a critical role in shaping policy and production practices, to date no comprehensive independent examination has been undertaken of US public attitudes toward laying hen housing systems.

The objective of this project, which was funded by a grant from the American Egg Board, was to establish a transdisciplinary team of experts to develop a systems approach for examining important issues concerning production practices. Although this approach was initially modeled and tested using laying hen production as an example, it is applicable to other animal production systems. The idea behind this approach is to generate and validate real-world data on performance, costs, impacts, and trade-offs of the proposed changes to production systems and to identify successful pathways to public trust and constructive civil discourse or deliberation on issues of social concern.

A coordinated systematic research approach such as this is critical to begin to unravel and fully address questions about laying hen production practices. It is also critical to planning the future of egg production so that values of high social importance and system attributes are both studied in the context of outcomes. Behavioral accommodation for animals, low environmental impact, safe and high-quality food, and economic vitality for the producer and reasonable food prices for

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the consumer are desirable outcomes of well-balanced and sustainable production systems.

Project Scope

The Socially Sustainable Egg Production project was conducted in 2 phases. The first phase involved the identification of critical issues, the formulation of study questions, and the development of an integrated systems approach through the use of expert study groups and a stakeholder workshop. The white papers featured in this issue of *Poultry Science* represent the output from the first phase of this project. The second phase, not yet completed, is to compose research proposal(s) for submission to funding agencies, using the research priorities identified by the respective study groups.

Coordination Team and Study Groups

The Coordination Team for the Socially Sustainable Egg Production project was composed of a group of established experts in the social, animal, and poultry sciences from Michigan State University, University of California, Davis, Purdue University, Iowa State University, Washington State University, and the USDA Agricultural Research Service Livestock Behavior Research Unit. The Coordination Team members identified individuals with the appropriate expertise to be members of 5 Study Groups:

1. Hen Health and Welfare
2. Supply Chain Dynamics, Economics, and Labor
3. Food Safety, Security, and Quality and Human Health
4. Public Attitudes, Discourse, and Assurance
5. Environmental Impacts, Ecological Integrity, and Sustainability

The Study Groups were composed of the appropriate mix of experts relative to the assigned critical area and included expertise from institutions other than those represented by the Coordination Team, including non-

US organizations. A chair was appointed for each Study Group. An expert from the egg industry and an expert from an animal protection organization were included in the Study Groups.

Workshops

Four workshops were held between April 2008 and November 2010. The first workshop entailed the Coordination Team developing the platforms for each critical area and nominating experts to populate the respective Study Groups. Subsequent workshops were held, during which Study Group members, the Coordination Team, or both worked through the development of the white papers.

After the final drafts of the white papers were developed, a professionally facilitated stakeholder workshop was held. Invitees were from both industry (egg producers, retailers) and external stakeholder groups (including animal protection organizations, environmental organizations, and consumer organizations), along with the members of the Coordination Team. In 2010, the stakeholders met for a 1.5-d workshop in Washington, DC. The results from the stakeholder workshop will be published in a future paper in *Poultry Science*, along with the related white paper on Public Attitudes, Discourse, and Assurance. This volume contains 5 of the papers presented at the 2010 PSA Emerging Issues Symposium, which together provide information about the policy and industry background to the debate, food safety and quality, environmental impacts, economics, and hen health and welfare.

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