

Board Research Initiative Request for Proposals

Improved Eggshell Quality in Cage-Free Layer Flocks

Background

Eggshell quality is important for food safety and beneficial egg quality attributes. The U.S. egg industry is moving to extensive cage-free housing systems to meet consumer and legislative demands. Companies transitioning face numerous unknowns regarding housing systems, including how to ensure that eggshell quality is maintained. Eggshell quality is multifactorial, and the interactions between the housing system and factors known to affect shell quality are not well understood. Numerous questions regarding management and mitigation of eggs laid outside of the system, or so-called “floor eggs” exist and best practices have not been identified for handling these eggs. Shell quality and production issues are a real concern, often resulting in severe financial loss.

Areas of Focus

- Identify methods and practices to reduce microfractures in shell eggs.
- Develop improved methods for egg management aimed at improving shell integrity in cage-free systems.
- Evaluate nutrition and environmental programs to maximize eggshell quality and integrity in cage-free systems.

Research Questions

- What management methods can be utilized to minimize eggs laid outside of the system?
- What novel management methods exist for handling eggs laid outside of the system?
- Are there nutrition and environmental program manipulations that can maximize eggshell quality and integrity in cage-free systems?

Proposal Submission

Researchers should submit only a maximum two-page pre-proposal summary that describes the parts of the objectives they wish to address and what they propose to do. A title, the researcher’s name, affiliation, and email address should be included in the pre-proposal. Details of procedures or specifics of the budget should not be included in the pre-proposal submission. Pre-proposals should be submitted in Microsoft Word format to Geraldine Dew at gded@uspoultry.org . **DEADLINE FOR PRE-PROPOSAL SUBMISSION IS NOVEMBER 1, 2021.**

The outcome of the pre-proposal review will be one of three responses from USPOULTRY:

- Send a full research proposal for consideration.
- Please make specific modifications in what you are proposing and send a full proposal.
- Do not send a full research proposal.

Full proposals will follow established USPOULTRY guidelines as seen at www.uspoultry.org . Funds can be used for graduate students, technicians, research supplies, and work and meeting travel. Funds cannot be used for professional (faculty or postdoc) salaries or equipment purchase. Up to 15% overhead is allowed. No budget, including overhead, may exceed \$125,000.