

AGRICULTURE

Impact of Educational Simulation Games on Interest in Poultry Management

Student researcher: Samantha Tinney, Senior

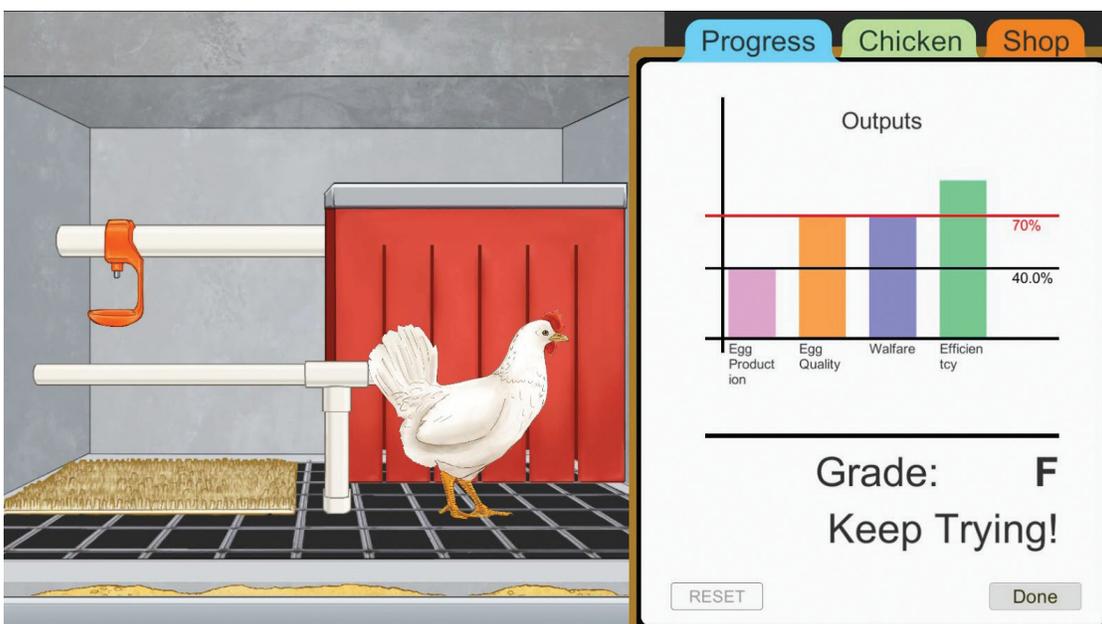
Indiana ranks second in the United States for table egg production. The table egg industry generates a large demand for qualified labor, and a considerable number of jobs are available in the state. However, the number of candidates qualified to fill these positions is insufficient to meet the industry's continually growing need. Introducing college students to poultry management opportunities may be capable of increasing the number of students pursuing careers in the industry.

This study explored the effects of playing a simulation game on undergraduate poultry management knowledge and interest in pursuing related careers. Experts at Purdue's Envision Center assisted with the creation of a laying hen game simulating welfare- and production-related decisions in a modern hen house. The simulation game consists of modules in which students learn about hen management, industry technology, and housing design. Players interact with mul-

multiple parameters to optimize egg production given different scenarios, allowing them to demonstrate comprehension of the material. Realistic estimates for game parameters were derived from peer-reviewed literature and commercial management guides. Questionnaires were given to 88 students enrolled in Introduction to Animal Agriculture in Spring 2018 to gauge student knowledge of poultry management and interest in poultry careers before and after game use.

Fisher's exact tests showed no significant differences before and after game use in levels of student interest in poultry careers or content knowledge. Future directions will include improvements to testing procedures, assessment of student perceptions surrounding game use, and larger sample sizes.

Research advisor Mary G. Erickson writes: "Sam's research targets a key issue: an insufficient number of qualified applicants are interested in pursuing the many jobs generated by Indiana's large and rapidly growing poultry industry. Through the use of an innovative management simulation game, this research attempts to impart knowledge and stimulate student interest and curiosity."



Screenshot of one of the simulation game modules. The player interacts with different parameters to impact outputs and are given a grade based on how close their output values are to the target value.