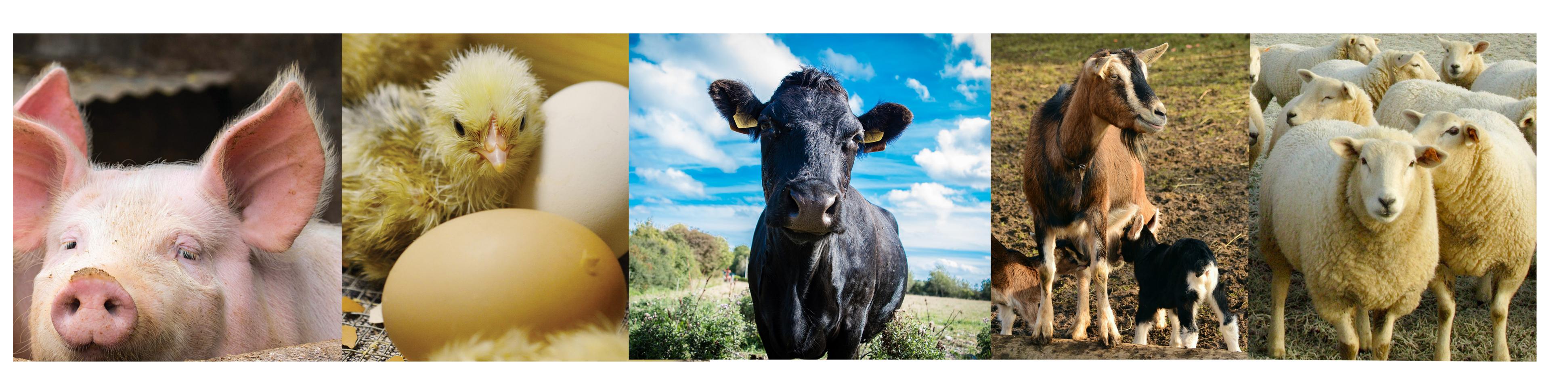# Animal Disease Biosecurity Coordinated Agricultural Project (ADBCAP)

A transdisciplinary approach reveals new insights for protecting farm animal health

Objective

Food animal diseases of socio-economic importance have implications for food security, perceived food safety, and marketing of animals or animal products. We investigated the human behavioral dimensions of preventing, detecting and responding to new, emerging, and foreign pests and diseases of livestock to identify effective strategies for industry stakeholders to apply with the goal of sustaining a productive, profitable, and secure food animal sector.

The ADBCAP is a multi-institutional collaboration supported by the USDA National Institute of Food and Agriculture

Project Overview

The Animal Disease Biosecurity Coordinated Agricultural Project, a multi-disciplinary, multi-institutional project, was funded by USDA NIFA from 2015 to 2021. The project team—comprising experts in animal science, veterinary medicine, agricultural economics, public policy, adult education and risk communication—used several approaches to understand human behavioral dimensions of animal disease spread. The project identified methods that enhance biosecurity strategies and practices to reduce the impact of new, emerging or foreign pests or diseases of dairy, beef and swine.
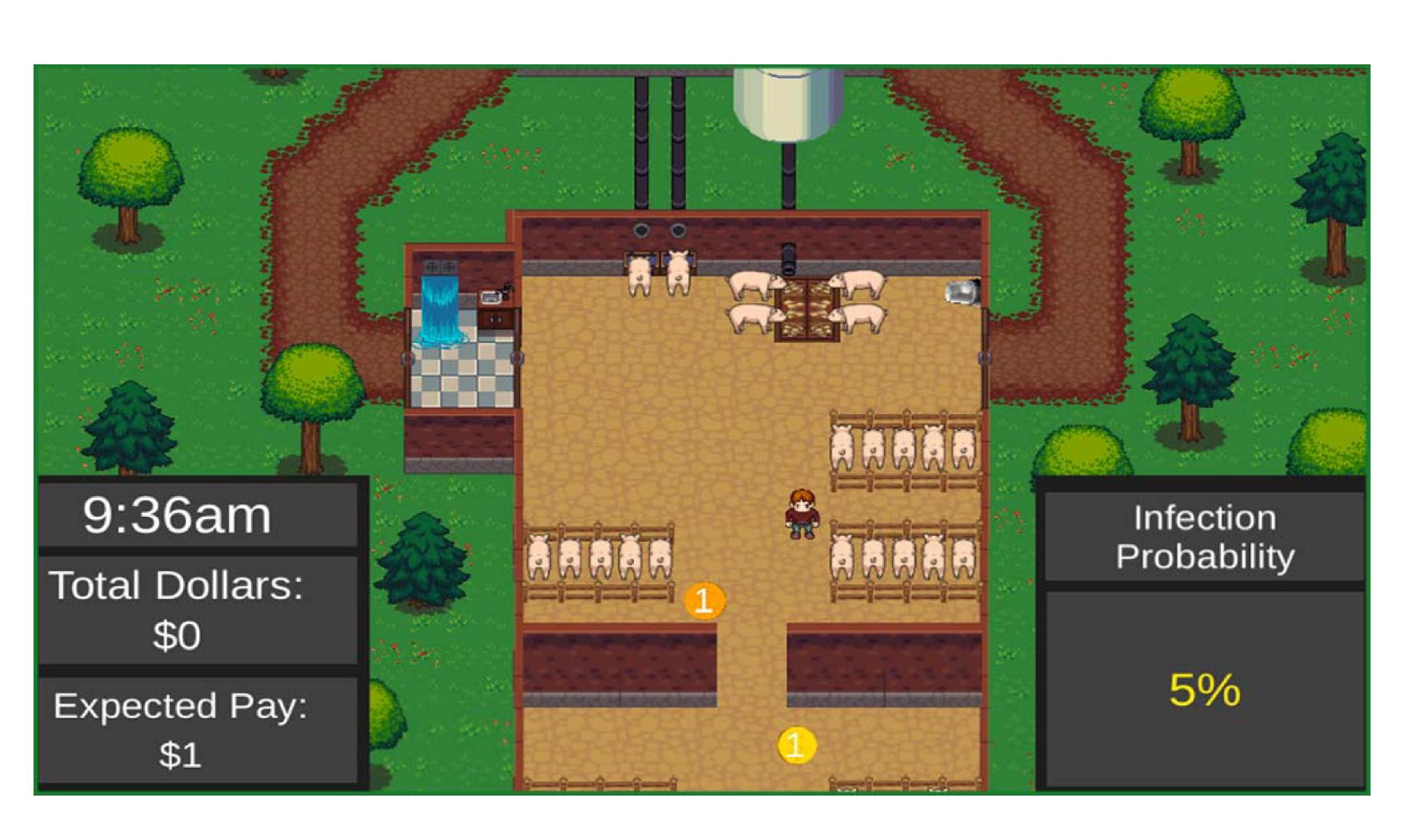
Results

Research publications have been published in several journals including Frontiers in Veterinary Science, Journal of Agricultural Science, Journal of Applied Communications, Journal of Artificial Societies and Social Simulations, Journal of Risk Research, PLOS One and Transboundary and Emerging Diseases. A workshop and symposium were held in College Park, Maryland during May 2019. Presentation recordings are posted at https://agbiosecurityproject.org, the project website. A website with biosecurity information for agricultural producers is available at https://healthyagriculture.org.

Methods

Experts in agricultural economics, animal science, communication, ecology, public policy, social science, veterinary medicine, and youth and adult curriculum development conducted a five-year project with research and outreach components. A variety of analytical approaches were applied to data gathered through surveys, interviews, workshops and digital experiments. Input from stakeholders guided the creation of digital experiments, models and online educational and training resources.

Conclusions

Integration of knowledge and perspectives with collaborators across the United States led to innovative approaches and improved interpretation of findings. As stated by team member Tim Sellnow, "We would not consider engaging in a project of this scope and nature without a transdisciplinary team."

Screenshot of simulated swine management game.

Collaborators

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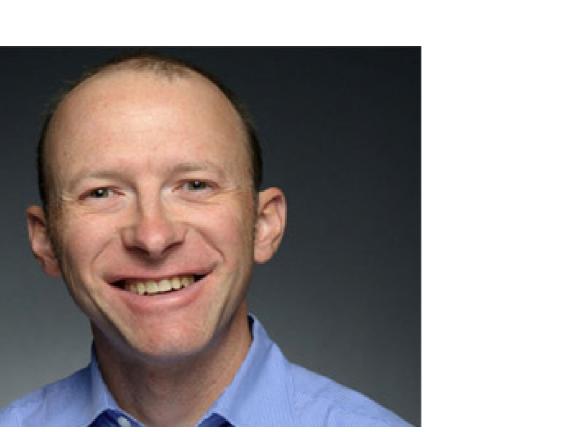
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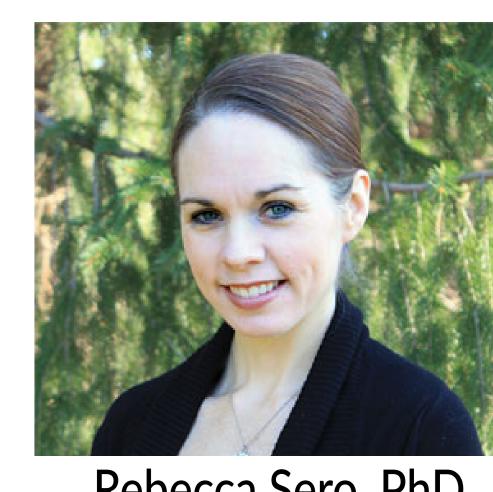
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Animal Disease Biosecurity Coordinated Agricultural Project

Agbiosecurityproject.org / Healthyagriculture.org