

Summary of GAO Study on Preslaughter Interventions to Reduce *E. coli* in Cattle

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Overview

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Background: Who is GAO?



As the investigative arm of Congress, GAO's job is to:

- Help Congress ensure that the federal government is operating efficiently and effectively
- Audit agency operations to determine whether federal funds are being spent appropriately
- Report on how well government programs and policies are meeting their objectives
- Investigate allegations of illegal and improper government activities

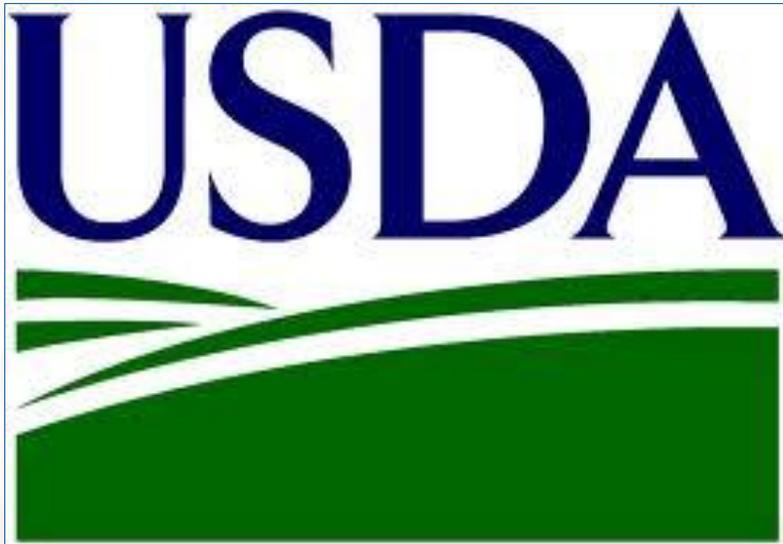
Background: Key Objectives

- Identify preslaughter interventions that may help reduce STEC in cattle
 - Identify USDA's role in approving STEC vaccines
 - Identify practices other countries have employed that could reduce STEC in cattle and may be relevant to U.S. efforts
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Background: Methodology

- Visited several cattle feedlots and a cattle slaughter plant
 - Conducted a total of 71 interviews
 - Reviewed studies, guidance, and requirements written by federal agencies, academic researchers, and foreign governments
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Agencies with Responsibilities Related to STEC Contamination in Beef - USDA



- Food Safety and Inspection Service (FSIS)
- Animal and Plant Health Inspection Service (APHIS)
- National Institute of Food and Agriculture (NIFA)
- Agricultural Research Service (ARS)



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Agencies with Responsibilities Related to STEC Contamination in Beef - HHS



- Food and Drug Administration (FDA)
- Centers for Disease Control and Prevention (CDC)

Preslaughter Interventions

Preslaughter intervention	Approved for use to reduce STEC O157:H7 in cattle	Agency responsible for approval
Antimicrobials	No	FDA
Bacteriophages	Yes	USDA, FDA
Colicins	No	FDA
Natural product extracts	No	FDA
Prebiotics	No	FDA
Probiotics	No	FDA
Sodium chlorate	No	FDA
Vaccines	Yes	USDA

Approval of STEC Vaccines

- Regulatory jurisdiction resided with FDA prior to 2005
 - In 2005, APHIS stated in a directive that it had authority to approve such products
 - APHIS approval requirements are unclear
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Other Countries' Practices

- **Cattle cleanliness:** Cattle in European Union member countries, Australia, and New Zealand are inspected for cleanliness
- **Testing in live cattle:** At least 12 European Union member countries collected and reported data on STEC in live cattle in 2009
- **Testing at specific farms:** In Sweden, when a person becomes ill from *E. coli*, Swedish government officials try to determine the specific farm that the individual came in contact with cattle and recommend testing of carcasses from that farm

Recommendations

GAO recommends that the Secretary of Agriculture take the following two actions:

- Direct the Administrator of APHIS to provide more specific public guidance on the license approval requirements for STEC vaccines in order to help improve clarity and reduce potential delays in the application process for these vaccines
 - Explore practices employed by other countries that are not currently used in the United States for reducing STEC in cattle and consider whether the identified practices can inform U.S. efforts
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USDA's Response to Report

- USDA generally agreed with the information in the draft report
 - Neither agreed nor disagreed with the recommendation that it provide more specific public guidance on the license approval requirement for STEC vaccines
 - Agreed to explore practices that are currently not used in the United States for reducing STEC in cattle and consider whether the identified practices can inform U.S. efforts
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Questions?

GAO on the Web

Web site: <http://www.gao.gov/>

Report number: **GAO-12-257**

Web site for report: www.gao.gov/products/GAO-12-257

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