The Center for Science in the Public Interest (CSPI)\(^1\) appreciates this opportunity to comment on the Food Safety and Inspection Service’s (FSIS) public meeting focusing on pre-harvest strategies and interventions to improve public health and reduce foodborne illness. CSPI is well-aware of the limitations of FSIS’ regulatory authority, and applauds the agency for collaborating with other relevant agencies to determine how best to minimize pathogens of public health concern at all stages of food animal production. While the pre-harvest meeting discussions focused mainly on the control of \textit{E. coli}, FSIS should recognize other significant pre-harvest issues related to the control of \textit{Salmonella}, which CSPI will discuss further in this comment.

It is well-settled that the entire lifecycle of animal production is important as it pertains to food safety—it is common sense supported by science that the treatment of animals on farm has an impact on the safety of the food produced from them.

Current production methods that include overcrowding in feedlots and dependence on the non-therapeutic use of antibiotics, for example, have led to conditions that are ideal for the development and spread of antibiotic resistant pathogens. Combined with a lack of adequate recordkeeping systems and weak regulatory oversight, feedlot conditions and the non-judicious use of antibiotics raise public health concerns about the propriety, efficacy and safety of current practices. Scientific and public concern over safety is especially strong because of the increasing prevalence of antibiotic resistant bacteria in intensive livestock production.\(^2\)

\(^1\) CSPI is a non-profit consumer advocacy and education organization that focuses largely on food safety and nutrition issues. It is supported principally by the 900,000 subscribers to its \textit{Nutrition Action Healthletter} and by foundation grants.

\(^2\) Ranjana Sharma, et al., Diversity and Distribution of Commensal Fecal Escherichia coli Bacteria in Beef Cattle
In the context of pre-harvest controls, solutions that rely on non-therapeutic use of antibiotics are addressing a problem that is rooted more in industry methodology than in the health of the animals. Stress, diet, seasonality and crowding have all been linked to increased pathogen shedding in cattle. *Salmonella* shedding by one infected cow can transmit the infection to others in the same feedlot.

Overuse of antibiotics (especially those that are critically important to human medicine) in food production presents continuing threat to public health. Wide use of antibiotics for both growth promotion and prophylaxis has been demonstrated to increase and spread antibiotic resistant strains of *Salmonella* and *E. coli*. Genotyping results confirm that strains move from animal to animal in feedlots, identifying the cattle as important reservoirs of resistance. These studies provide evidence against the use of antibiotics as a pre-harvest control. They also identify a need for increased monitoring for antibiotic resistant strains in feedlots.

CSPI believes the research, when added to outbreak data, reveals a troubling trend from improper use of antibiotics for growth promotion that is aggravated by the need for prophylactic use to prevent disease in overcrowded conditions. Outbreak data analyzed by CSPI provides a compelling basis for concern over the public health risk posed by antibiotic resistant bacteria. In a review of 37 documented outbreaks linked to antibiotic-resistant bacteria since the 1970s, we found over 20,000 people were sickened from these 37 outbreaks, resulting in 3,100 hospitalizations and almost 30 deaths. Of the 37 documented outbreaks, 30 were linked to antibiotic resistant *Salmonella*. Nine of the outbreaks, 540 illnesses, occurred in ground beef, making it the second most common food implicated after dairy.

CSPI recently filed a petition with USDA asking that four strains of antibiotic resistant *Salmonella* to be declared adulterants, which provides for better testing for these strains of *Salmonella*, and may reduce the serious health threat they present, which is well within the authority of FSIS. We are hopeful the agency will provide a swift and positive review of our petition. We also encourage the agency to look to changes in the methodology of food production – through dietary interventions, reduced crowding and better sanitation in feedlots and pre-harvest record keeping and control systems – as the most effective way to address dangerous pathogens pre-harvest. Doing so will avoid a collateral and detrimental impact on


3 Ranjana Sharma, supra.
public health from interventions that cause an increase in antibiotic resistant bacteria that are already present in our food supply.

CSPI also recognizes that additional technologies may be in development to aid in pre-harvest controls of pathogens of public health concern, including vaccines for *E. coli* O157:H7 and *Salmonella*. Although FSIS does not have authority to approve or regulate these vaccines, we urge the agency to initiate a formal collaboration with the Center for Veterinary Biologics (CVB, the relevant agency under the auspices of the Animal and Plant Health Inspection Service) with authority for licensing vaccines for use in food animals. We believe that CVB and FSIS should partner to determine the appropriate expectation of efficacy for vaccines with a primarily public health impact (as opposed to vaccines that focus on a reduction in animal disease). CVB is not a public health agency, nor does it have the expertise in public health prevention that is necessary to appropriately discharge its regulatory authority with regard to these new applications. We urge FSIS to initiate a partnership on this issue with CVB, and to ensure that discussions about these issues will be as transparent as is reasonable.

We appreciate FSIS’ focus on pre-harvest interventions, and applaud the agency for its continued focus on prevention and on public health.

Sincerely,

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