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FOOD ANIMAL CONCERNS TRUST

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Richard R. Wood

Statement of Richard R. Wood, Executive Director
Food Animal Concerns Trust

at the Public Meeting on FSIS Policy on E. coli 0157:H7

February 29, 2000

Thank you for this opportunity to provide comments regarding the FSIS policy on E. coli 0157:H7. Food Animal Concerns Trust (FACT) is a non-profit organization that advocates for the use of better farming practices to improve the safety of meat, milk, and eggs. I am Richard Wood, Executive Director of FACT. We welcome this FSIS initiative "to ensure that its E. coli policy is implemented on the best available information and in a manner that will best protect public health."¹ Our response focuses on issues related to the 1st and the 6th questions that are before us today.

Question 1: Should E. coli 0157:H7 be addressed in animal production HACCP plans?

FACT supports the use of on-farm HACCP pathogen controls for all producers raising cattle for food consumption. With new US Department of Agriculture data showing that E. coli 0157:H7 is more prevalent in feedlot cattle than previously thought, the FSIS food safety system should be one that truly moves from "farm to table." FACT believes that the stakes are too high to allow highly contaminated cattle to enter the slaughterhouse door and then to trust that everyone else is vigilant from that point on to the dinner table. FACT wants the farm and the feedlot to be an integral part of any FSIS pathogen control response. We need to move forward with the science that we have in hand.

¹ Federal Register Notice of Public Meeting: February 11, 2000 (Volume 65, Number 29), page 6881.

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A growing body of evidence exists in the literature regarding on-farm mitigation steps and this pathogen. These studies should form the basis of the on-farm response, with other steps being added or modified as new studies warrant.² For example:

1. Water: Research has shown that a transmission point for E. coli 0157:H7 among cattle is the water trough where this pathogen can survive for at least 4 months in its sediments. This hardy pathogen can persist for long periods even at cold temperatures. Research has found that keeping water troughs clean and regularly changing the water for cattle appears to be the most effective barrier to the disease.
2. Feed: The 1994 NAHMS Cattle on Feed Evaluation (COFE) found that cattle receiving barley were 2.75 times more likely to have a positive sample than cattle not receiving barley. Another study found a significantly higher prevalence of E. coli 0157 in herds where corn silage was fed to heifers than in herds.³ The use of propionic and acetic acids appear to inhibit growth of fecal E. coli. These relatively low-cost organic acids are already used by the food industry to inhibit microbial growth in human foods. Adding such acids to feed stored outside should be evaluated as a mitigation step to protect cattle from E. coli 0157:H7. Other studies point to bird and rodent contamination and the need to frequently clean out feed bunks.
3. Stress: Research has demonstrated that stress may cause calves and full-grown cattle to become more susceptible to infection by E. coli 0157:H7, and that management measures to prevent stress may reduce the spread of infection. Research has found that calves were 3 times more likely to shed E. coli 0157:H7 after weaning (mean weaning age was 8 weeks of age) than before weaning. In fact, one study conducted in Australia found that calves being weaned from milk to solid food had the highest rates of Shiga-toxin producing E. coli shedding on dairy farms. A prior study also found that shedding of E. coli 0157:H7 was associated with grouping calves before weaning, where the stress from crowding and competition may have triggered shedding of the organism. The evidence demonstrates that stress influences the intestinal flora. Continued research is needed focusing on stress related to crowding, transportation, and changes in diet.

It is time for on-farm controls.

² DD Hancock, TV Lynn, TE Besser, Pre-harvest Safety: Should we do it and is it possible?, Compendium of Continuing Veterinary Education 9/97.

³ The basis for this association maybe that once corn silage is removed from the silo, exposed to air and mixed with other ingredients, corn silage could provide a moist growth medium for environmental bacteria, including E. coli 0157. The study noted that E. coli can replicate to high concentrations in mixed rations containing corn silage when it is maintained at environmental temperatures for 24 hours. Cattle rations containing silage are commonly left in the feed bunk for 24 hours or more, thereby permitting an opportunity for both contamination with bacteria and bacterial replication.

Question 6: How effective are voluntary producer actions?

FACT believes that while Quality Assurance Programs are good producer education tools, they are no substitute for the nation-wide HACCP needs required by the current situation with E. coli 0157:H7. Reliance on voluntary programs will not provide consumers with the confidence that the food is safe. First, the voluntary programs are not accountable to the public through the regulatory agencies. There is no publicly available data as to the actual number of producers participating in these programs, nor any assurance as to the potential for full participation. While beef industry quality assurance program brochures imply broad participation, the NAHMS Cattle on Feed Evaluation found that only 18% of the operations surveyed participated in a quality assurance training program. The question of participation numbers remains. Furthermore, there is no public accountability as to what the program requires regarding pathogens, and whether or not the requirements are verified mitigating steps.

Second, the quality assurance programs may vary widely from state to state. In other commodity groups where individual state programs exist, state-based programs have led to a patchwork of diverse programs and requirements. This situation gives consumers little confidence when faced with a production system where feedlots in several states ship to the processing plants in yet other states. We can ill afford a patchwork response to E. coli 0157:H7.

FACT calls for a federally regulated on-farm HACCP pathogen program. This program would assure consumers that the federal response to E. coli 0157:H7 involves all producers, that these producers are meeting the same standards of pathogen controls, and that these standards are the same throughout the industry in the U.S.

Thank you.