

# FOOD POISONING OUTBREAK

## Fluid Milk Plant - E. coli O157

### What is E. coli O157?

E. coli O157 is a strain of bacteria known to cause foodborne disease. The most common sources of this infection have been ground beef and unpasteurized milk. However outbreaks have also been linked to fresh fruits and vegetables. Symptoms range from severe diarrhea to kidney and heart failure with acute cases leading to death. The disease is particularly severe in infants and young children.

### What Happened?

In May 1994, over a 24-hour period, several confirmed cases of E. coli O157 infection were reported in southwest Scotland. The common factor in these infections was consumption of pasteurized milk processed at a local dairy plant. As a precaution, milk production was suspended at the plant within 36 hours of the first cases being reported.

### The Investigation at the Dairy Plant:

The dairy plant suspected of being the source of the infections was a typical fluid milk processing plant utilizing an HTST pasteurizer. No deficiencies were found with the HTST public health safety controls but further investigation at the dairy plant revealed the source of the E. coli O157. Swab tests found the organism in two locations: in a pipe between the pasteurizer and the filler machine and in one of the filler machine filler tube rubbers.

### What Can We Learn From this Outbreak?

While pasteurization is the primary public health critical control point in a dairy plant, it is not the only control point.

While it is not known how the E. coli O157 became located on the pasteurized side of the HTST, an adequate cleaning and sanitizing program for the equipment would have removed the organism before it would have had a chance to establish itself. It is essential that adequate cleaning facilities and equipment, as well as properly trained personnel following established procedures are in place, to ensure that all equipment is cleaned properly every day.

### Conclusion

Over 100 people were confirmed to be affected from this outbreak. Of these, almost one-half of them were children. Several required hospitalization and nine of them developed hemolytic uremia syndrome (kidney failure). Two of these children are still on dialysis and require kidney transplants.

For further information contact the Dairy  
Plant Specialist at Food Protection  
Services

604.707.2440

Revised June 28, 2002

