

**For discussion
on 17 July 2001**

**Legco Panel on Food Safety and Environmental Hygiene
E. coli O157:H7 Found in Cattle Carcass Samples**

Purpose

This paper provides Members with information relating to the discovery of E. coli O157:H7 during routine surveillance in Sheung Shui Slaughterhouse (SSSH) in June this year.

Background

2. E. coli O157:H7 is a bacteria commonly found in the intestines of cattle and can infect other parts of the animal when slaughtering is not properly done. The toxin that E. coli O157:H7 produces may affect human health, causing diarrhoea, or in serious cases, leading to internal haemorrhage and other serious complications. The incubation period of the bacteria usually ranges from three to five days. Children, the elderly and the chronically ill are especially prone to be infected. As the bacteria can be killed at high temperature, it is safe to consume the beef so long as it has been thoroughly cooked at a temperature of 75°C for over two to three minutes.

E. coli O157:H7 Surveillance Programme in Slaughterhouses

3. Since E. coli O157:H7 is commonly found in the intestines of cattle, the cattle slaughtering process must be strictly monitored. In order to ensure a hygienic slaughtering process, the Food and Environmental Hygiene Department (FEHD) has drawn up Working Guidelines (see Annex, only Chinese version is issued) governing the hygiene standards in cattle slaughtering. Health Inspectors stationed at the slaughterhouses are responsible for supervising the enforcement of the Working Guidelines. Seminars are arranged to educate staff of slaughterhouses about general knowledge of hygiene, especially noteworthy things in the slaughtering process.

Since April 1997, an E. coli O157:H7 surveillance programme has been put in place at slaughterhouse where cattle are slaughtered (presently cattle are slaughtered in SSSH only). Samples from the epidermis of cattle carcasses are regularly collected by Government staff for analysis to monitor the presence of E. coli O157:H7. The data so obtained enables the authority to effectively monitor the overall hygiene conditions of the slaughterhouse as well as to better supervise the slaughterhouse in enforcing the hygiene regulations. The Institute of Pathology of the Department of Health (DH) is responsible for the analysis of E. coli which normally takes about five days.

The latest incident

4. On 16 June 2001, FEHD was informed by the Institute of Pathology of DH that E. coli O157:H7 was found in a sample taken from a cattle carcass on 12 June 2001. This is the first time that the bacteria is found in a sample since implementation of the slaughterhouse surveillance programme.

5. Upon receipt of DH's report, FEHD immediately conducted thorough cleansing of the slaughter lines and disinfection of all equipment of SSSH. Environmental swabs were then collected for analysis to ascertain that SSSH was cleared of E. coli O157:H7. Meanwhile, FEHD took immediate action to trace the outlet where the contaminated beef had been sold. On the same day (16 June), the concerned outlet was identified. FEHD staff were sent to supervise the person in charge of the outlet in cleansing and disinfecting his equipment to kill any bacteria which might still be present. They also briefed the workers of the outlet about hygiene matters.

6. The analysis of all environmental swabs taken from SSSH has been completed and none of them is found to contain E. coli O157:H7. The record showed that the intestines of the animal had not been pierced during the slaughtering process. As to the reason for contamination of the beef at the slaughterhouse, it is possible that the body of the animal was not thoroughly washed, the slaughtering equipment was not thoroughly sterilized or the personal hygiene of the staff was unsatisfactory. FEHD has followed up on this incident with the management of Ng Fung Hong, who has promised to step up supervision of their staff to ensure that the Working Guidelines on hygiene issued by FEHD are strictly complied with.

Announcement of the E. coli O157:H7 surveillance results

7. Being part of the “Hazard Analysis Critical Control Point” (HACCP) system, the E. coli O157:H7 surveillance programme aims at monitoring the hygiene conditions of the slaughtering process and effecting immediate rectifications and improvements if problem is detected in the process. Take the latest incident as an example, upon receipt of the analysis result, FEHD must thoroughly disinfect the slaughter lines at once and urge the slaughterhouse operator to step up staff supervision and strictly enforce the Working Guidelines governing hygiene drawn up by FEHD. FEHD has no intention at all to cover up the incident by failing to release, once available, the analysis result of the slaughterhouse surveillance on E. coli O157:H7.

8. Since the Government has the responsibility for ensuring food safety and safeguarding public health, every effective measure including the setting up of a sound surveillance system should be adopted. However, no matter how comprehensive our surveillance system is, we cannot eliminate food risk which ubiquitously exists. If storage and cooking of food and personal hygiene are not satisfactory, the risk will increase accordingly. Hence, we always remind the public of the importance of food hygiene, especially that food should be thoroughly cleaned and cooked during preparation. We will continue to promote food safety and step up publicity in this regard.

Food and Environmental Hygiene Department
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