CASE STUDY

Strain Typing Helps Beef Slaughter Plant Quickly Identify *E. coli* O157:H7 Source

Over three days, a beef slaughter plant experienced a high event period with 68 samples that tested positive for *E. coli* O157:H7. Plant personnel needed to find answers quickly to what had gone wrong in their process. Every day the production line ran without knowing the root cause put the plant at risk of experiencing another high event period.

Scientists from Food Safety Net Services (FSNS), a Certified Group Company, used Bruker IR Biotyper® technology to perform strain typing on the 68 isolates in just 6 hours after cultural confirmation was completed – exponentially faster than other technologies like PFGE or WGS. The output from the Bruker IR Biotyper® showed that 61 of the 68 isolates (91%) were highly related to one another.

This information allowed plant personnel to quickly identify a source and focus their decontamination efforts on a single machine, which ultimately resolved the issue and helped the plant return to their normal operations.

CHALLENGE

Identify the source of *E. coli* O157:H7 that caused 68 samples to test positive over 3 days.

DIFFICULTIES

Find the potential source throughout a large beef slaughter plant as quickly as possible to implement corrective actions.

SOLUTION

Performed strain typing on the 68 *E. coli* O157:H7 isolates in just 6 hours using the Bruker IR Biotyper®, helping the plant focus its decontamination efforts.

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