

Bad feed believed behind mad-cow disaster

By JILL MAHONEY

EDMONTON -- The Alberta cow at the centre of Canada's BSE crisis did not contract the disease genetically, an international conference heard yesterday.

The research ruling out a familial link supports the likelihood that the cow became sick from eating contaminated feed, said Michael Coulthart, who is the director of Health Canada's National Laboratory for Prion Diseases.

"The smoking gun is not available. It's very, very difficult to use the word proof in connection with an infectious origin for this animal's disease. But everything else that has ever been experienced in the world about BSE is consistent with it having been an infectious case," he said.

Soon after experts confirmed in May that the Alberta cow had bovine spongiform encephalopathy, researchers in Dr. Coulthart's lab examined a tissue sample to see whether the cow had a gene mutation in all its cells that would have been passed on genetically.

"Our findings were completely negative; we found no such mutation," Dr. Coulthart told reporters yesterday.

The findings have been submitted to a scientific journal for publication, and are now being peer-reviewed.

If the cow contracted BSE from feed contaminated by the remains of other sick cows -- which is the most common mode of transmission -- it would mean that other animals have been infected with the disease.

"We do not know if that animal is unique," Dr. Coulthart told a gathering of about 200 international scientists who study prion diseases -- degenerative neurological illnesses that are always fatal.

Maura Ricketts, a senior medical adviser with Health Canada, told conference-goers that countries often have a serious problem on their hands by the time they record their first case of BSE. She said the disease's long incubation period "can be hiding an epidemic from us," but also noted that some experts believe having a single case is not indicative of an epidemic.

"Is it really credible that in Canada we only have one cow with BSE? . . . We have to look deep and ask ourselves if that is really plausible," she said.

After the Alberta case was discovered, the Canadian Food Inspection Agency and the Alberta government said they would conduct more BSE-surveillance tests.

Feeding rendered, ruminant-derived feed products back to ruminants -- which include cows, sheep, goats, elk and deer -- was banned in 1997. The sick cow is believed to have been between six and eight years old, meaning it could have eaten tainted feed in its lifetime. Mad-cow disease is believed to have an incubation period of two to eight years.

While feed transmission is considered likely, it is also possible that the cow contracted the disease spontaneously, which is difficult to prove. Lorne Tyrrell, dean of the faculty of medicine and dentistry at the University of Alberta, said the international community should distinguish between a single case of BSE, which could have been spontaneous, and larger outbreaks. About 30 countries still have bans on Canadian beef and cattle, a move that has left the industry reeling.

Dr. Ricketts said world levels of BSE pose a grave concern to public health. Humans can develop Creutzfeld-Jakob disease by eating beef contaminated with prions, the infectious proteins that cause BSE, which are concentrated in tissue of the central nervous system.

"This is just not good from a public health professional's perspective," she said. She also noted that some slaughterhouse practices, including those that remove meat mechanically from the bone, could subject lower-quality beef to contamination with prions from a cow's spinal column.

"Your little ravioli with meat stuffing in it could be of considerably higher risk than a huge steak," she said.

However, officials said the process, which occurs only in federally regulated abattoirs, is highly regulated.