Fish-farm salmon tainted: study

TOM SPEARS
CanWest News Service

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Atlantic salmon from fish farms around the world is tainted with cancer-causing chemicals, according to a new study.

This is especially true of salmon from European farms but also to a lesser degree fish from Canada and the United States.

It's not safe to eat farmed salmon from any country more than once a month, according to authors of the study in the journal Science. The levels of pollutants reported in the study were no surprise to Ottawa or salmon industry officials, but they're too small to merit such a warning, said Glenn McGregor, who directs fish inspection for the Canadian Food Inspection Agency.

McGregor said the amounts of PCBs and other contaminants in salmon have been dropping steadily for decades and are now at "ultra-trace" levels. Dioxin, for example, is at the level of less than one part per trillion, he said from Ottawa.

When Health Canada received the Canadian Food Inspection Agency's most recent salmon inspection report a few months ago, no consumption warning was issued, McGregor said.

The new once-a-month recommendation is based on "irresponsible science," contended Alex Trent, executive director of the newly formed Salmon of the Americas, which represents salmon farmers in Canada, the U.S. and Chile.

"There are more PCBs in meat and dairy products than in salmon," he said from Princeton, N.J.

Scientists who prepared the study findings "jumped from third base to ice hockey," Trent said, noting the U.S. National Academy of Science recommends that the public eat two servings of fish a week.

Dennis Legere of Heritage Salmon, a Bay of Fundy salmon farm, said the the Canadian Food Inspection Agency and the U.S. Food and Drug Administration have some of the most stringent food safety guidelines in the world. "They give us the thumbs-up and green light on our product," he said.

Salmon from Europe represents only 5 per cent of the North American market, Trent said.

Mike Montagna, sales vice-president of United Seafood of Montreal, said he sells "a couple of cases" of Scottish salmon a week, compared with 300 cases of Canadian salmon from the east coast and 400 cases from Chile.

"It's (Scottish salmon) an expensive specialty," he said

The new study recommends consumers check the country of origin whenever they buy Atlantic salmon, limiting consumption of European fish because it contains the highest levels of PCBs, pesticides and other pollutants.

While the study didn't examine farmed Pacific salmon, it did include the Atlantic species farmed on the Pacific coast.
All the farmed salmon had higher levels of pollutants than their wild Atlantic cousins, which have become very rare in North American stores.

The farmed fish contain DDT, PCBs - a banned industrial oil common until the 1970s - dieldrin, a pesticide from the same era widely banned today, and nearly a dozen other "organochlorine" pollutants, the type that persist for decades if dumped into lakes and rivers.

These are all chemicals familiar to any scientist who studies water pollution in the Great Lakes, the world's major rivers or industrial harbours. Many are associated either with cancer or a reduced ability to have healthy offspring among animals that eat too much of them.

That also goes for humans who consume large amounts of chemically tainted fish. The body stores these chemicals in its fat.

Salmon, which is a relatively high-fat fish, builds up levels of pollutants present at lower levels in the fish it eats. Ironically, this same fish oil contains the "good" cholesterol that helps prevent heart attacks.

Until now, no one had done a major study of many salmon from many sources, said fisheries scientist Daniel Pauly of the University of British Columbia.

Pauly said this should be a starting point for the study of balancing the risks and benefits of eating farmed salmon, "because up to now the discussion didn't happen. Now it has been forced on to the discussion table."

The six-member international team, led by analytical chemist Ronald Hites of Indiana University, analyzed about 700 salmon - more than two tonnes of fish in all - either bought directly from fish farms or from supermarkets in 16 cities in Canada, the U.S., Britain, Norway, France and Germany.

"Farmed salmon fillets purchased from supermarkets in Frankfurt, Edinburgh, Paris, London and Oslo were generally the most contaminated," with Boston and San Francisco fish close behind, they found.

Fish in Toronto and Vancouver supermarkets had more pollutants than wild salmon, but had considerably less than the European fish.

The scientists traced most of the contaminants to commercial salmon feed made of ground fish and oil, with chemical levels especially high in European feed.

Using fish-eating guidelines from the U.S. Environmental Protection Agency, the report's authors say it's safe to eat less than one farmed salmon meal every two months in Germany and Scotland, which had the most-tainted fish.

Gazette food editor JULIAN ARMSTRONG contributed to this report

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