



SUPERFOOD OR FRANKENFOOD?

– THE DEBATE OVER GENETICALLY MODIFIED SALMON

Sharratt, head of the Canadian Biotechnology Action Network.

MIXING SPECIES

Critics are also concerned about the ecological impact of GM salmon. AquaAdvantage salmon are raised in land-based, fresh water tanks at AquaBounty's hatchery on Prince Edward Island. Ninety-nine percent of the fish are **sterile**. But what if some salmon did escape?

"For every 100,000 fish there's going to be 1,000 fish that are **viable**," said a spokesman for a conservation organization. "If they do get out, there are concerns . . . with them passing their genes on to wild fish."

GM salmon accidentally released into the oceans could also compete with wild stock for food. And they might transmit new diseases to wild salmon.

THE AQUAADVANTAGE ADVANTAGE

Supporters of GM salmon, however, say that any risks would be offset by huge benefits. Salmon is one of the healthiest proteins for people to eat. And in a world where food shortages are becoming a big problem, being able to produce larger quantities of

DID YOU KNOW?

GM salmon won't be for sale in Canada anytime soon. AquaBounty has only recently applied to Health Canada for permission to market its salmon in this country, and it typically takes seven years or more before a product is approved.

ABOUT GM FOODS

There's nothing new about scientists trying to develop different and better species of the plants and animals we grow for food. For years, they've been selectively breeding to transfer desirable traits from one variety to another – developing potatoes that are more resistant to pests, for example. However, selective breeding takes time. Several generations of the plant or animal have to grow to maturity and reproduce in order to select for beneficial genes.

Genetic engineering, on the other hand, is more precise. It also works a lot faster. In simple terms, the process involves scientists cutting out the genes of one **organism** and then pasting them into another organism.

GM crops are grown in more than 20 countries around the world. The U.S. is the leading producer of GM foods, but relatively large amounts of gene-altered crops are grown in Argentina, Brazil, Canada, and China.

In Canada, GM foods are regulated by Health Canada. This agency has approved about 85 GM food products for sale since 1994. They range from insect-resistant corn and herbicide-resistant canola to genetically modified yeasts that reduce levels of unwanted compounds in wine.

Supporters of GM foods say that genetic engineering can produce plants that are more resistant to pests and diseases, and require less use of pesticides. It can increase crop yields, and produce longer lasting and better tasting fruits and vegetables.

But critics worry about the impact of GM foods on human health and the environment. Several countries have banned GM crops. Others, including the European Union, Japan and Australia, insist that food products containing GM ingredients be labeled so that consumers can make their own choices.

quality foods at a lower price is a huge advantage.

"This is a potentially important way to get salmon to maturity quicker, increase the supply, decrease prices and make this high-quality source of protein at lower prices," said Ronald Stotish, AquaBounty's CEO.

DON'T RUSH THE PROCESS

Critics don't necessarily disagree with this perspective. But they want officials to make sure the new fish is safe before it gets to market.

"When you have a new technology like this, what you need to do is go to the scientific community and convene a food safety committee and say, 'What are the food safety issues that ought to be addressed in order to call this new food safe?'" says Margaret Mellon, of the group Union of Concerned Scientists.

"To me, we're treading on new legal, scientific and certainly consumer territory," she said. "I would say the salmon has been a long time in the oven, but it's still half-baked."★

DEFINITIONS

ORGANISM: any biologically based entity, such as a plant, fungus or animal

STERILE: incapable of reproducing

VIALE: capable of living, developing, or germinating under favourable conditions