Farmed Salmon and Human Health

I have a number of concerns regarding Farmed Tasmanian Salmon and Human Health.

CANOLA

Not only is canola fed directly to the fish but it is fed to the chickens, whose fat and feathers go into the feed. I suspect it is also fed to the pigs, whose blood meal and meat meal goes in to the feed.
Canola is not a natural crop. It is a hybridised form of rapeseed. Rapeseed is toxic to humans and is primarily used as a motor lubricant and furniture polish.
A Dec 2017 study by Dr Domenico Practico from Temple University, Philadelphia, involved feeding one group of mice the human equivalent of 2 teasp of canola per mouse per day. The other group received their normal chow. After 6 months the mice in the group that received the canola had significant weight gain compared to normal and an impairment in their working memory with a reduced level of a protein which is a marker of synaptic integrity. Canola is thus implicated in neurodegeneration which in human terms means dementia and Alzheimer's disease.

Canola has also been linked with constipation, anaemia, fibrotic lesions of the heart, lung cancer and prostate cancer. Macular degeneration has been found to progress more rapidly when vegetable oils [including canola], are a regular part of the diet. Canola contains large amounts of isothiocyanates which are cyanide containing compounds. These have been found to disrupt the mitochondrial production of ATP which translates to energy.

Since 1995 Monsanto has been producing GM canola to resist the effects of Round Up. It is now estimated that 85-90 % of the world's canola is GM canola. It is a small blessing that Tasmania is GM free. The question is, how can we be sure that the animals who are going into the fish feed have not received GM canola. The well respected mainland company Lilydale free range chickens admits to feeding their birds GM canola as it is half the price. The labelling laws in Australia are such that any milk, meat, fish, eggs or honey from animals that have had GM stockfeed, does not have to be labelled GM. Likewise, any highly refined product such as canola oil, does not have to be labelled GM, even if the canola it is extracted from is 100% GM. I stand to be corrected but I think the only way we can be sure we are eating GM free is to buy food with Organic certification.
In Feb 2018 the company Nuseed was given approval for DHA Canola, another form of GM Canola. I question whether this is also GM canola to resist Round Up. Despite the DHA, it is still canola!

In 2009 the American Academy of Environmental Medicine issued a statement: GM foods pose a serious health risk in areas of toxicity, allergies, immune function, reproductive health, metabolic, physiologic and genetic health.

OMEGA3:OMEGA6 RATIO

A Nov 2015 study reported that wild salmon had a ratio of 10:1
Farmed salmon from the northern hemisphere 3-4:1
We were able to obtain figures from a Tasmanian fish farming company and the numbers were 1:1.3
This is at complete odds with the healthy levels in the wild salmon which are anti inflammatory in the body. If anything this ratio will support the inflammatory state. Inflammation in the body is associated with such conditions as cardiovascular disease, cancer, auto immune diseases, pain and arthritis, asthma and irritable bowel syndrome. Moreover the problems of behaviour and learning

difficulty in children and a host of mental illnesses, are said to be because of “brains on fire” or inflamed brains.

PERUVIAN FISH MEAL

There are 2 concerns re Peruvian fish meal. Firstly it has antibiotic residues and Antibiotic Resistant Genes [ARGs], and secondly Persistent Organic Pollutants [POPs] are present in significant levels.

A 2017 study with peruvian fish meal was carried out by a chinese researcher Jing Wang from Dalian University of Technology. 500ml flasks with seawater and sediment collected from a fishfarm that had never applied antibiotics or fishmeal. The flasks that had the fishmeal added had a 10x increase in ARGs after 50 days.

Peruvian fishmeal was found to have 16mg antibiotic per gram and 41 resistant genes. Fishmeal is usually made with low value fish that can bioaccumulate antibiotics present in the environment. If ARGs are taken up by pathogenic or disease causing bacteria and such pathogens end up in the intestines of fish and are eaten by humans, antibiotic resistant infections could potentially occur. It is not only the farmed fish that carry these ARGs but also any wild fish who share the same environment.

Prof Stuart B Levy, Director of the Centre for Adaptation Genetics and Drug Resistance at Tufts University School of Medicine has said:
“The exchange of genes is so pervasive that the entire bacterial world can be thought of as one huge multicellular organism in which the cells exchange their genes with ease.”

When a bacteria has developed a resistance to an antibiotic the resistant strains that can arise can often show resistance to other antibiotics to which it was not exposed to. This increases the risk that human bacterial diseases will evolve that cannot be treated by conventional antibiotics.

POPs are man made chemicals that bioaccumulate in animals and humans. They include industrial chemicals, PCBs, organochlorine pesticides , dioxins and furans. In humans they suppress the immune system, are linked with depression, endocrine disorders, reduced fertility, cancer, behaviour and learning problems and neurodevelopmental disorders. Farmed fish are especially vulnerable to POPs as they have 70% more fat than wild fish and POPs acumulate in fatty tissue.
A 2011 study published by Mohaamad Madani Ibrahim concluded that chronic consumption of farmed salmon contributed to several metabolic disorders linked to diabetes type 2 and obesity and suggest a role of POPs in these deleterious effects. The levels of type 2 Diabetes and obesity are skyrocketting in Australia and other “developed” nations

An American toxicologist Dr David Carpenter has advised that farmed salmon from Northern Europe be eaten no more than 1x every 4 months and farmed salmon from other countries 1x per month.

POPs can act as oestrogens and this has been cited for the reduction in male births since the 1970s and a 400% increase in men having breast reduction surgery in the UK over the past 4-5 years.

IMPACT OF FISH FARMS ON LOCAL COMMUNITIES

In May 2015 a submission was made into the Fin Fish Aquaculture industry in Tasmania by Doctors for the Environment.

It cited a concern re the bioaccumulation of PCBs in the marine environment and stated that a number of residents from the Channel and Huon had expressed concerns about the effects of the local aquaculture industry on psychological health and wellbeing. Nightime activities caused considerable disturbance re lights, noise and trucks entering and leaving shore based facilities. Many long term residents had chosen to live in these areas for the peace and quiet.
Feelings of loss of solace, anger and frustration as well as chronic sleep deprivation has led to psychosomatic illness in some residents.

IN CONCLUSION

If you care about your health,
if you care about the health of our children and future generations,
if you care about your loved ones and fellow human beings, and
if you care about the health of our beautiful oceans,
please consider carefully what you serve at your table.