

Cathal Dinneen
Nordic Aquafarms
LD 586

To whom it may concern,

My name is Cathal Dinneen and have been growing fish in commercial land-based facilities in different parts of the world for more than 25 years including Ireland, the UK, Iceland, Canada and Norway. I am currently based in Maine where I am employed as Senior Vice President of Production for Nordic Aquafarms – a land-based fish farming company with operations in Norway and Denmark and plans to build two large, recirculated facilities in both Maine and California.

I am writing to you on behalf of Nordic Aquafarms to express our opposition to LD 586 for a number of reasons:

1. The bill is vague and does not define what constitutes “industrial” and/or “recirculating” aquaculture. Many land-based aquaculture facilities and hatcheries include some degree of “recirculating” technology due to the need to maintain water temperature, reduce water consumption, reduce pathogen risk and to make it practical to treat and clean any waste streams generated. For this reason, it should be noted that this bill, as written, must also apply to state and federal hatcheries, shellfish and seaweed hatcheries, and shellfish holding facilities.
2. To impose a restriction on the fish diet that inhibits the use of any inclusion level of “wild marine ingredients” is unrealistic. Virtually all commercial operations growing finfish today rely to some extent on marine ingredients to ensure the normal growth and development of the fish in providing essential Omega 3 fatty acids and other key ingredients that are difficult to substitute. The bill's prohibition of certain feed ingredients will prevent farmers from meeting the nutritional needs of the fish they raise and potentially lead to animal welfare issues.
3. The bill ignores the fact that feed composition is constantly improving and evolving and has changed dramatically in the last thirty years as the industry has effectively self-regulated as it constantly strives to improve. Today the diets fed to the fish incorporate a greater proportion of vegetable proteins and vegetable oils, fisheries trimmings from fish processing plants and land animal proteins. So, unlike in the 90's when fishmeal and fish oil inclusion levels were at 50% and 30% respectively, today it has reduced to 10% & 9% in the case of diets we currently use in our European facilities and continues to improve as new novel ingredients are scaled-up and commercialized (new raw materials from lower trophic levels such as fermentation of micro algae, fermentation of single cell proteins, increasing use of insect meal, etc.).
4. The bill ignores the fact that modern fish farms have Aquaculture Stewardship Council (ASC), Best Aquaculture Practices (BAP), Global Gap and other similar certifications that require that feed mills meet strict environmental and social requirements, source ingredients from socially responsible suppliers and use environmentally responsible raw materials.
5. The bill states that feed sources must be free of “pollutants and contaminants”. Feed ingredients and finished feed are subject to strict regulations under the Federal Food, Drug and Cosmetic Act to ensure they are not dangerous to feedstocks, pose a threat to human health, or cause damage to the environment. All aquaculture feed suppliers are required to monitor raw materials and finished feeds for environmental contaminants including but not limited to PCBs, heavy metals, and pesticides to ensure these contaminants are well below the legal safe limits according to US (FDA) and European standards (EFSA).
6. The bill could be viewed as discriminatory and biased (against aquaculture) since:
 - a. No other commercial activity in the state is required by law to be carbon neutral as demanded in the bill.
 - b. No other form of animal production prohibits feed ingredients essential to the nutrition of the animal being raised.
7. It is my professional opinion, having worked in the industry for more than 25 years, that the overall impact of the above conditions will be to put Maine at a competitive disadvantage and

to discourage any further potential aquaculture investment in the State.