



Dear F3 Friends and Supporters,

We are excited to share with you our update on activities during this past year to encourage replacement of fishmeal and fish oil. In February, we convened the second [F3 meeting](#) , which brought together over 144 people from aquaculture investors, academics, the most promising ingredient companies, synbio tech companies, and the largest aquafeed producers. The meeting was a huge success! We invite you to watch and share this [highlight video](#) from the event. Attendees included:

- [Ingredients](#): The largest insect meal company from South Africa, Agriprotein, the largest algal oil companies, and researchers from Australia, US and Europe. Leaders from synthetic biology also spoke about technological developments that could affect feed.
- [Feeds](#): Six of the largest Chinese companies, the largest salmon farm, and the largest shrimp exporter, and a top Indonesian feed company were also in attendance. Salmon and shrimp are top consumers of global fishmeal and fish oil.

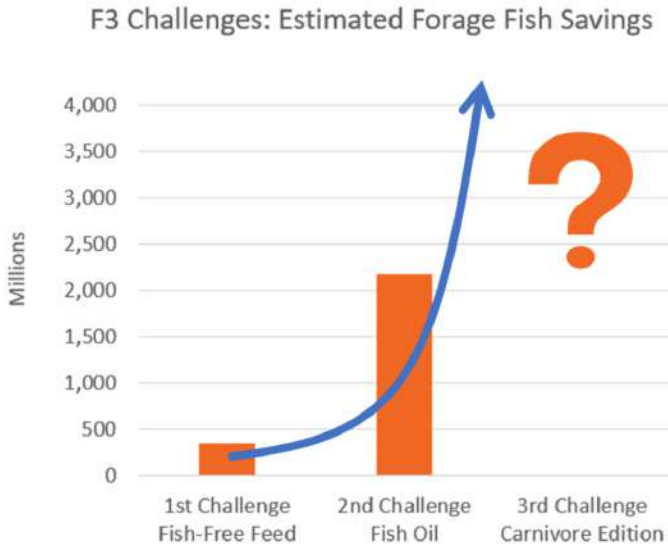
This year, we had a media panel with industry journalists. We also addressed key issues holding up progress: Tom Gruber, inventor of Siri, led a brainstorming session on bottlenecks to F3; Geoffrey Moore, world-famous business strategist [spoke pragmatically](#) about how small companies can move into mass production in *Crossing the Chasm*; and how large companies can balance resources to innovate or *Zone to Win* . The meeting ended with analyzing seafood buying behavior in the US (Arlin Wasserman), comments from seafood buyers, including Red Lobster and May Mei of Goal Blue providing a perspective from China.



F3 Meeting speakers. Top row, left to right: Tom Gruber, Geoffrey Moore. Bottom row, left to right: Arlin Wasserman, May Mei.

Forage fish yield proteins and oils. Substitutes are available for proteins, so the ongoing F3 contest targets the key strategic ingredient that has no nutritionally equivalent substitute, fish oil. The ongoing F3 Fish Oil challenge gained momentum with a generous donation from Christy Walton's aquaculture Investment firm Cuna del Mar that doubled the prize to \$200,000. The winner will be announced next month at the Global Aquaculture Alliance's GOAL conference in Chennai, India.

At the end of the day, it is all about impact. Our calculations indicate that the first challenge saved roughly 350 million forage fish, and this second contest to date has saved over [A BILLION forage fish](#) . To keep this momentum going, we have just launched the next [F3 Challenge - Carnivore Edition](#) , that targets the species that consume the most fishmeal and fish oil globally. Just today, stories appeared in [Feed Navigator](#) and [Forbes](#) !



A bottleneck in adopting nutritionally equivalent substitutes for fishmeal and fish oil is research. To this end, we supported a project to determine the true value of forage fish that estimated forage fish to be ~3 times the value of the fishery because of its importance in supporting commercial fisheries and other [ecosystem services](#) . We are also experimenting in reducing fishmeal and fish oil in feeds for the aquacultured animals that consume the most.

There is also progress this year in getting F3 fish to market:

- Tesco, the world's 3rd largest retailer, has committed to offering [algal oil fed seafood](#) at its 3,400 stores.
- German retail chain Kaufland is now selling [Lingalaks salmon](#) that is fed algal oil, instead of fish oil that is EPA and DHA rich.
- Insect fed trout is now on the [menus of famous French restaurants](#), showing that these alternatives do not sacrifice taste or texture from the perspective of consumers.

We now have [a video](#) explaining the F3 problem that also explains the business opportunities for a general audience . Please share!

Thank you again for your support which makes it possible to tangibly conserve wild forage fish, remove a growth bottleneck for aquaculture, and better assure seafood for the world into the future.

Sincerely,

Kevin Fitzsimmons, F3 Challenge Chair and Judge, and the F3 Team