OPTIMAL FISHFOOD

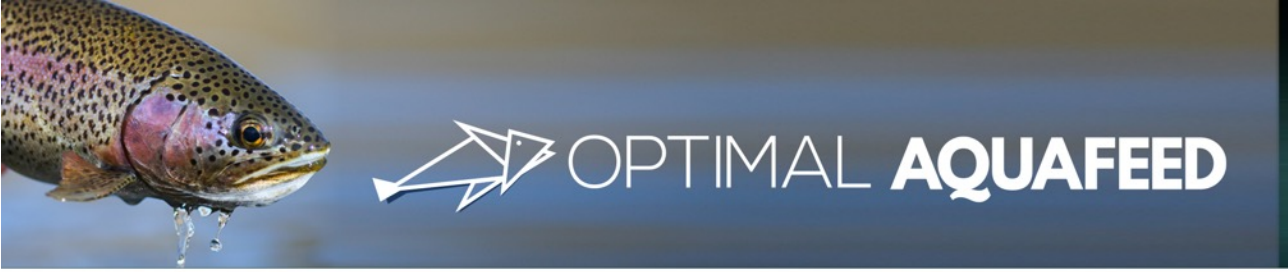
Who We Are

Optimal Fish Food is a pond and lake feed company committed to producing the highest quality, performance-driven fish feed in the marketplace by utilizing innovative technologies and novel ingredients to promote health and longevity across a wide range of freshwater species.

OPTIMAL AQUAFEED

Who We Are

Optimal Aquafeed is a multifaceted nutritional partner for fish producers worldwide. We listen to the exact needs and goals of our clients and empower them to produce fish that can exceed their targeted growth, health, flavor, and price. As your nutritional partner, we assist assist in strengthening feeding programs as well as provide specialized high-quality feeds, blends, and ingredients designed specifically for our clients fish, system, needs, and goals.



“I can’t say enough how wonderful the customer service has been when I have worked with Optimal. These guys have been great. And most importantly, the fish are responding unbelievably. ”

“I started feeding Optimal Bluegill 2 years ago. The fish have loved it from the start, no rejection, a few redear (not many, but some!) eat it, and the growth rates, WOW. Easy ordering and to my door delivery is a sweet benefit too. ”

OPTIMAL AQUAFEED

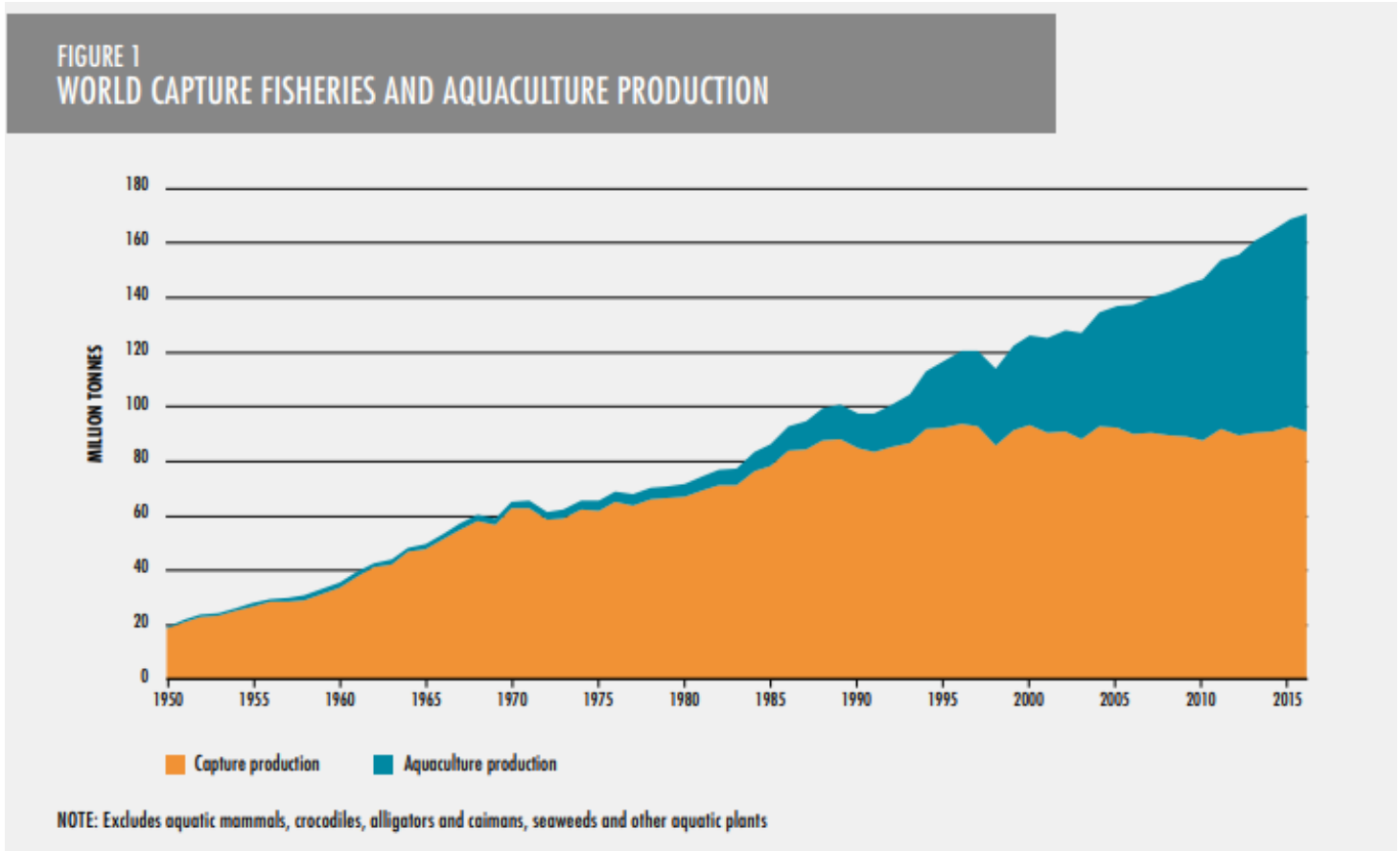
OPTIMAL FISHFOOD

“ After 6 weeks of attempting to feed train my RES on a competitor feed and observing no pellet strikes, on day 10 of feeding Optimal I observed 102 strikes in 15 minutes on a half cup feeding. Impressive stuff. Well done guys. ”

“ I can’t say enough how wonderful the customer service has been when I have worked with Optimal. These guys have been great. And most importantly, the fish are responding unbelievably. ”

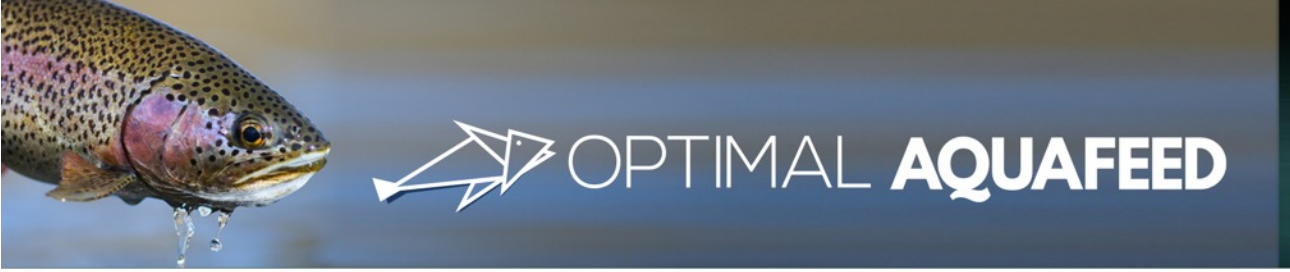
Aquaculture

- Estimated to be a $219.4 billion industry
- $18.2 billion dollar trade deficit
- $2.7 billion dollar industry in U.S.
- FCR for fish is near 1:1

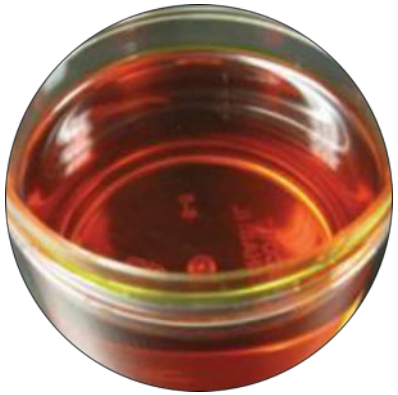


RAS

- There are ~1265 aquaculture sites in the USA
- Recirculating Aquaculture Systems
- Large commercial projects planned on East Coast
- Significant investments into growth of RAS



Innovate



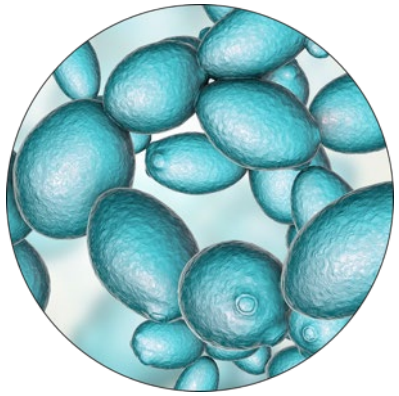
OIL

PROTEIN

FIBER

SUGAR

ALGAE



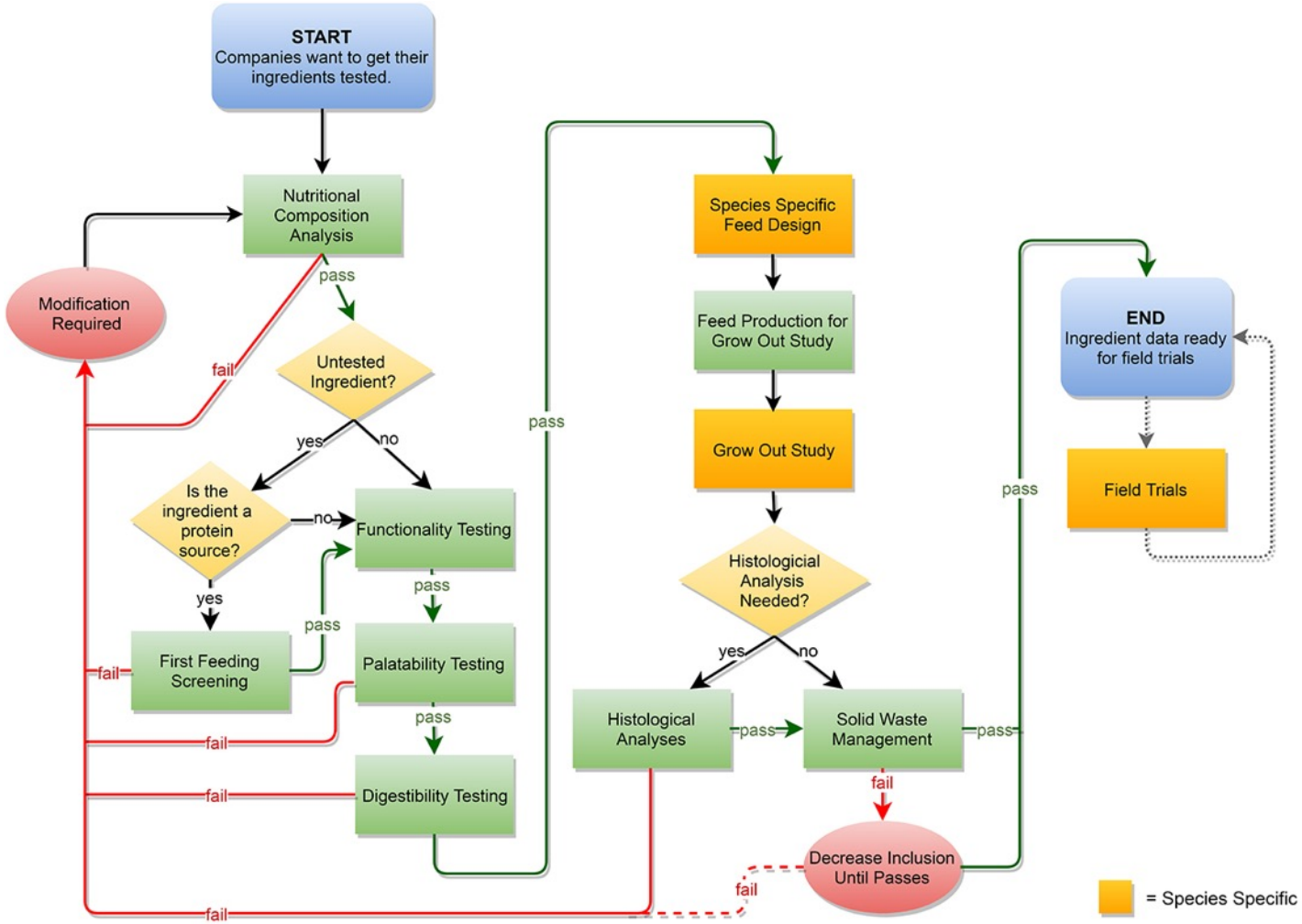
YEAST

Corn Distiller Grain - Challenges

- Corn
- Consistency & Supply
- Protein Levels & Quality
- Enteritis
- Pigmentation

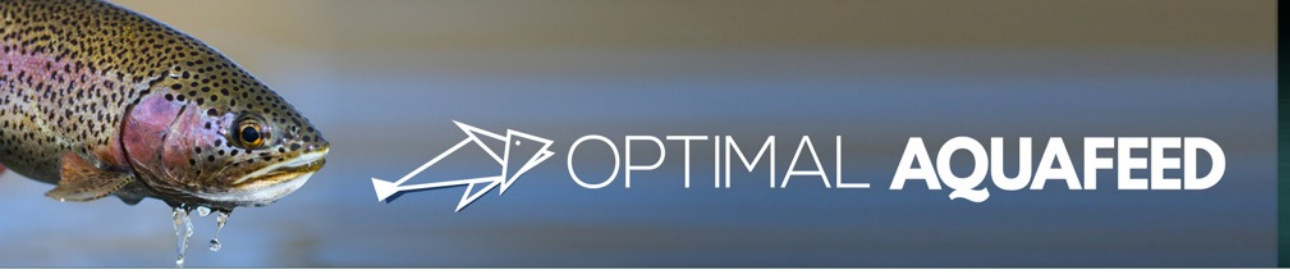
Evaluate

Draft protocol is based on procedures from the US Department of Agriculture's Agriculture Research Service (USDA/ARS) and Glencross et al. (2007), and the contribution of the F3 team was to standardize the workflow and present it pictorially.



Aqualab

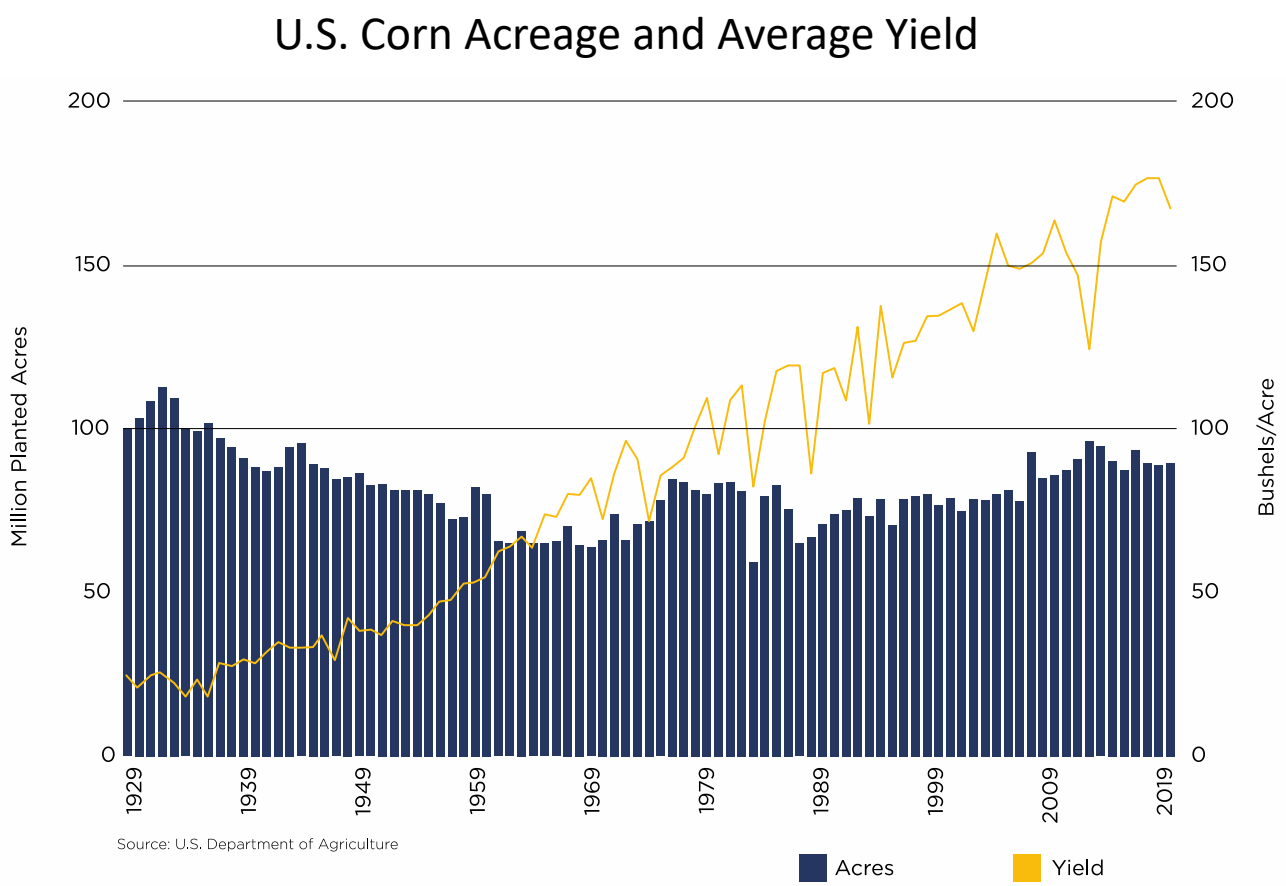
- Research and Innovation



CORN

- Offers a sustainable solution
- More protein without increasing gmo’s or acreage

Corn Distiller Grain - Solutions

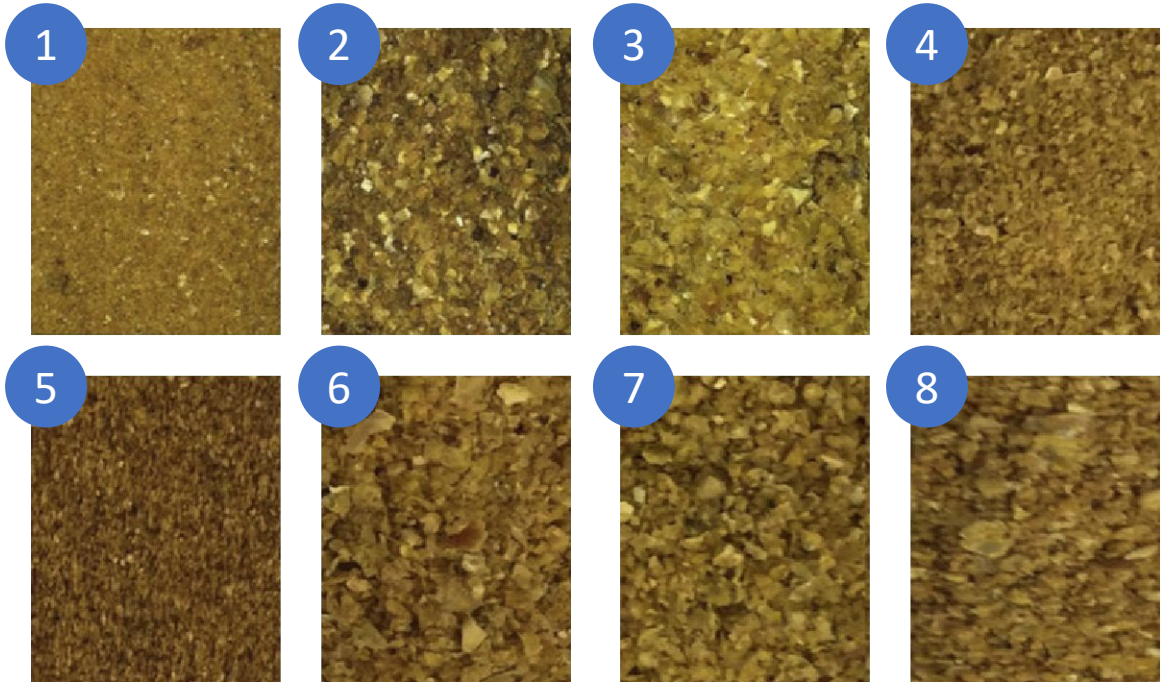


CONSISTENCY & SUPPLY

Corn Distiller Grain - Solutions

- Sophisticated systems to produce protein with the intention of producing protein

Variations in Corn dried Distillller Grain with Solubles



PROTEIN LEVELS & QUALITY

Corn Distillers Grains - Solutions

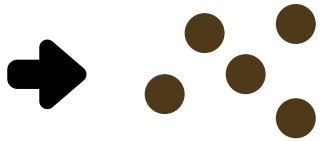
- New products have >49% protein with opportunities to push even higher
- Lower fat levels allow for higher inclusions
- Digestibility – more sophisticated drying systems reduce protein damage from heat
- N supplementation, flocculants, and low moisture levels are red flags

Enteritis

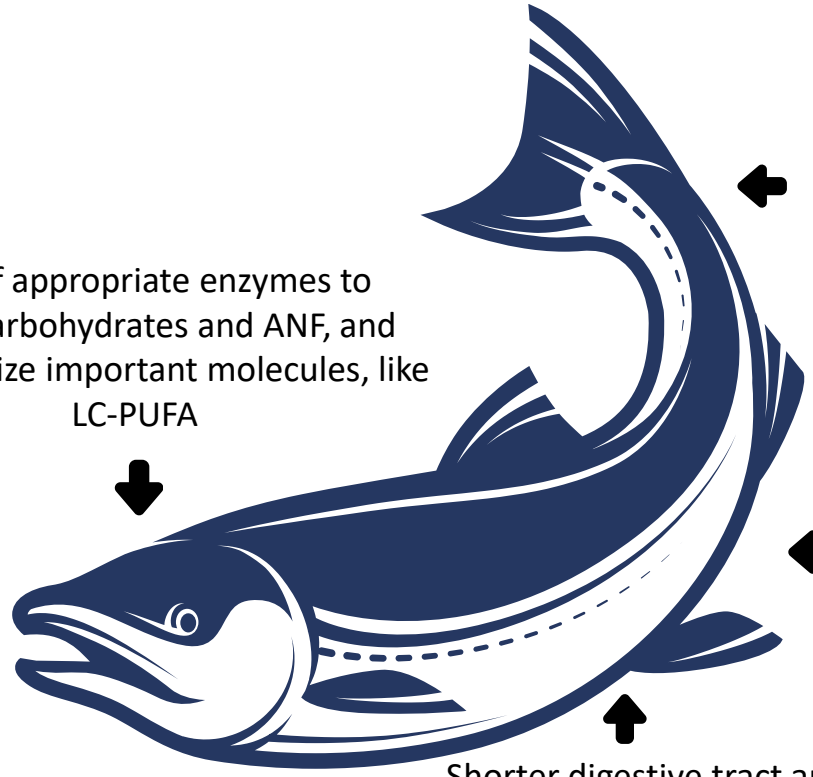
Corn Distillers Grains - Solutions

- Elevated yeast inclusions

ANF in plants can prevent digestion and absorption of nutrients



Lack of appropriate enzymes to digest carbohydrates and ANF, and to synthesize important molecules, like LC-PUFA



Reduction in growth, Due to lack of digestibility and absorption of nutrients

Physiological changes in intestinal cells can lead to inflammation and enteritis

Shorter digestive tract and shorter gut transit time

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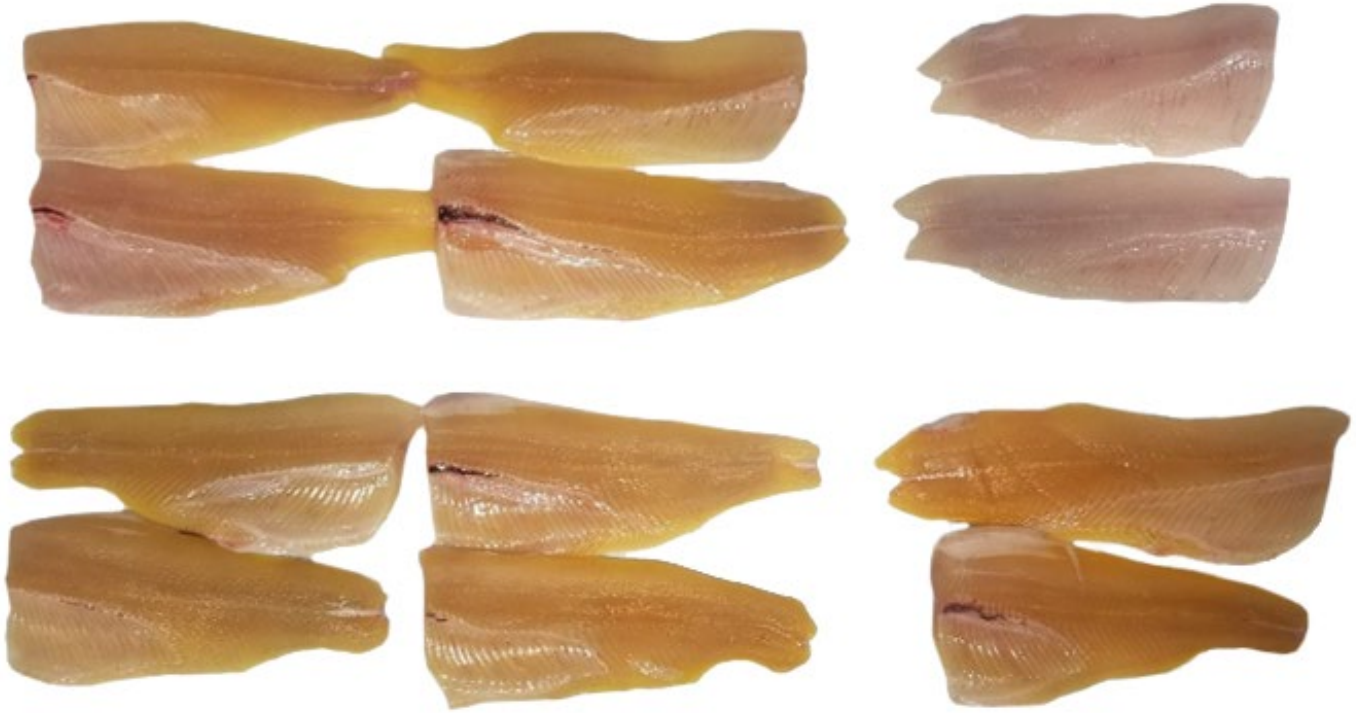
Pigmentation

- Fermentation and process impacts amount of pigment present in fillet

Corn Distillers Grains - Solutions

Evaluating the Impact of Corn on Filet Color



Commercialize

- We happily pay premium prices for premium ingredients
- Early access to innovative ingredients provides us a valuable competitive advantage
- Pilot scale supply is enough to begin commercialization in low-risk environment
- As commercial volumes scale and move to larger customers, we look to next generation of products

OPTIMAL AQUAFEED

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SOLitude Lake Management

Case Study – Success Story

- Successful inclusion of high protein distillers grain

SOLITUDE LAKE MANAGEMENT