

**thrive**<sup>TM</sup>



**A new  
generation of  
canola oils for  
food and feed**

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# A New Crop Brings Opportunities

**“THE GLOBAL MARKETPLACE SHOULD PROVIDE MANY PROFITABLE OPPORTUNITIES FOR CANOLA FARMERS AND PROCESSORS IN THE YEARS AHEAD” – GUILLAUME BASTIAENS, VICE CHAIRMAN CARGILL, IN OPENING REMARKS AT THE OPENING OF CARGILL’S NEW CANOLA PLANT AT CLAVET SASKATCHEWAN IN JULY 1996**

- **1974** University of Manitoba produces the variety Tower with lower levels of erucic acid and glucosinolates forever changes the oilseed world
- **1991** InterMountain Canola introduces Clear Valley 65 low linolenic canola oil for the frying industry
- **1993** InterMountain Canola introduces Clear Valley 75 high oleic low linolenic canola oil for the food ingredient industry
- **1994** Cargill acquires InterMountain Canola from Dupont and integrates it into its global crush and refining infrastructure
- **1996** Cargill opens its crush plant in Clavet which has become the largest canola plant in the world.
- **2008** Cargill supplies McDonald’s with Clear Valley 65 creating a trans free frying solution that delivered the same great taste of its famous French Fries

# In 25 YEARS FOOD INDUSTRY REFORMULATED FRYING OILS TWICE IN RESPONSE TO SCIENTIFIC DATA

ANIMAL FATS  
and PALM OIL

Partially  
Hydrogenated  
Oils

0 TRANS



- >**1980**- SATURATED FAT IS NOT HEALTHY
- >**1990** - LABEL SATURATED FAT
- >**2000** – TRANS FAT IS WORSE THAN SATURATED
- >**2003** – LABEL TRANS FAT
- >**2018** – PHO IS NO LONGER GRAS



# Creating and Maximizing Consumer Value



# HO Canola Penetration of Food Markets



# Customers Demand More from High Oleic Products



## Grower Customers

- Higher returns
- Greater yields
- Simple program



## Foodservice Oil Customers

- Extended fry life performance
- Improved nutritional profile
- International growth



## Food Manufacturer Oil Customers

- Extended shelf life
- Improved nutritional profile
- International growth

# In designing a new oil know the customers use: Frying Performance

**What  
Determines  
Performance?**



**Store  
Operations**



**Oil  
Type**

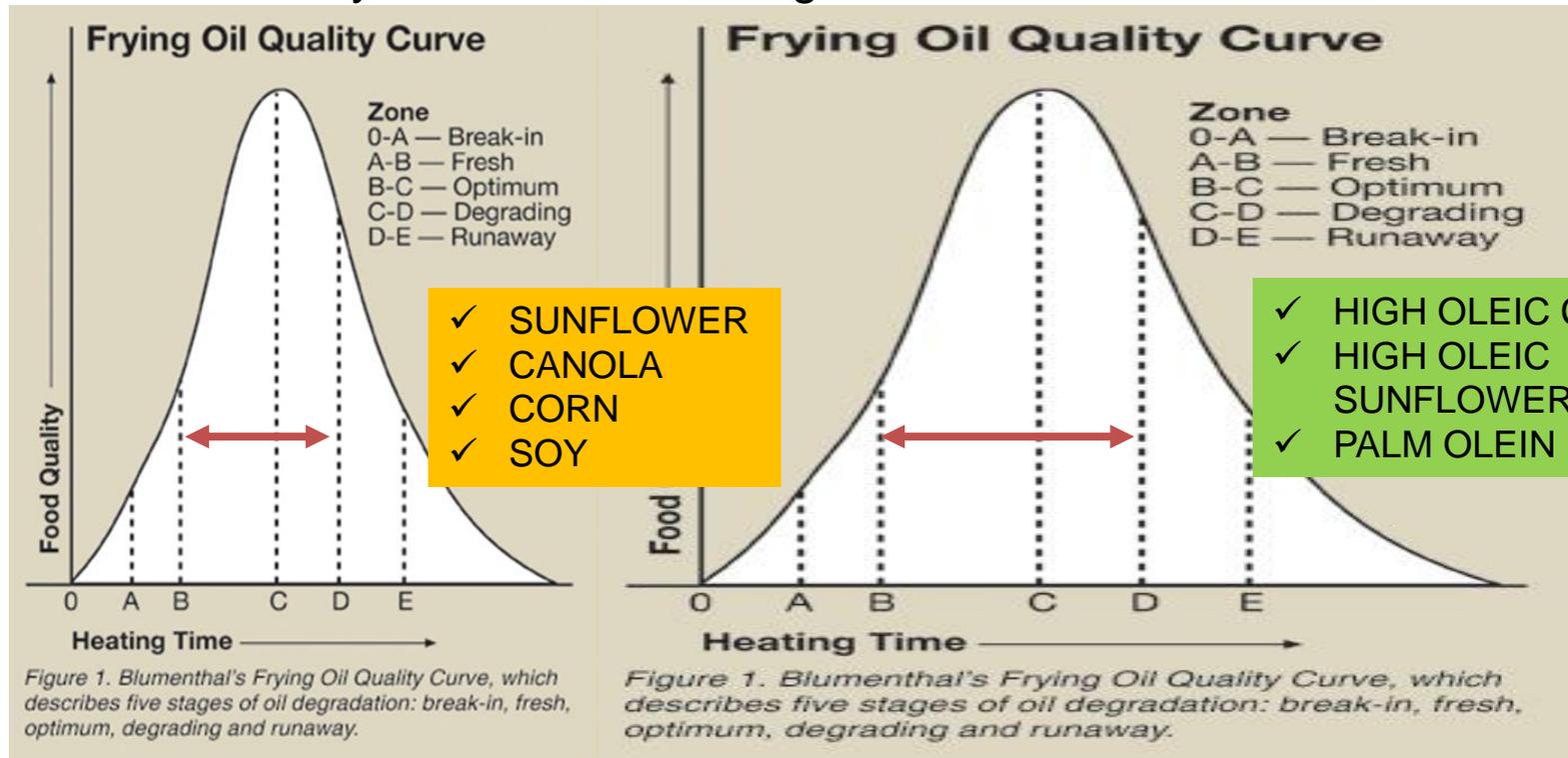


**Food**

# FATS&OILS 101: Cheap frying oils are not the most flavorful, economical or healthiest solution

## Commodity Oils

## High Performance FRYING Oils



Source: "Process Control: Ensuring the Safety and Quality of Fried Foods". Richard F. Stier. Food Safety Magazine June/July 2007.

# New Oil Starts with: What are Consumers Thinking?

# R&D Begins Knowing the Consumer



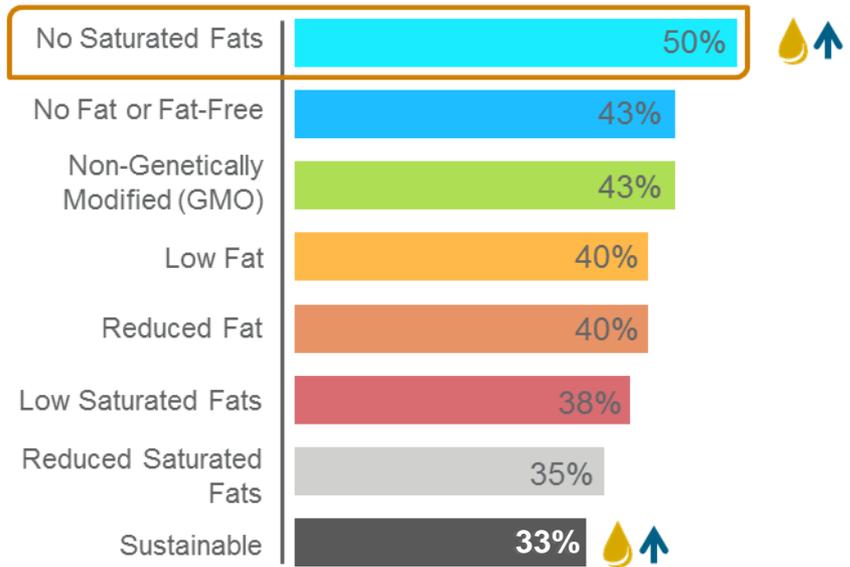
“How likely are you to check a package for the following claims related to the amount or type of oil in a packaged food?”

“To what extent do you pay attention to the type of oil or amount of fat in each of the following categories before you purchase a particular product?”

“How likely are you to check a package for the following claims related to the amount or type of oil in a packaged food?”

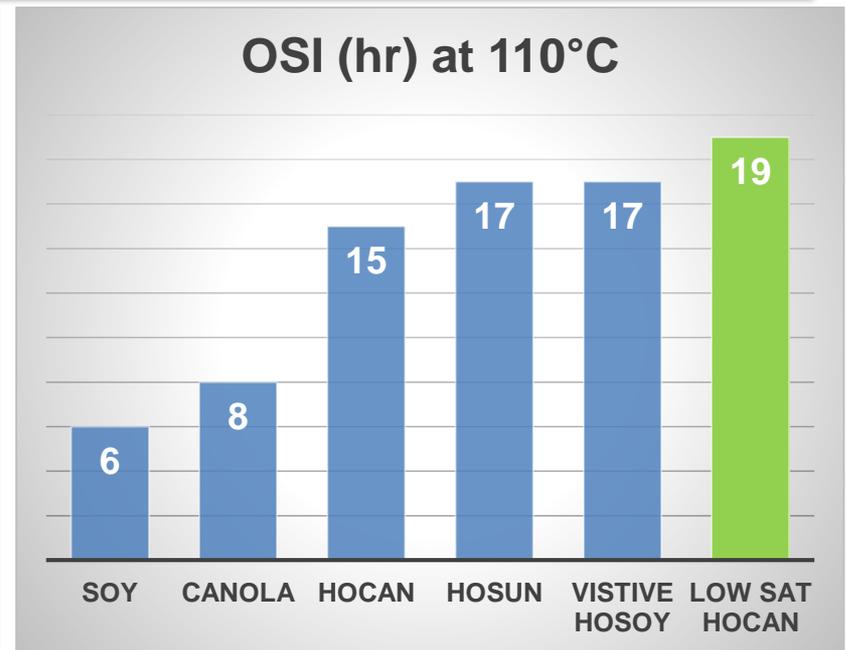
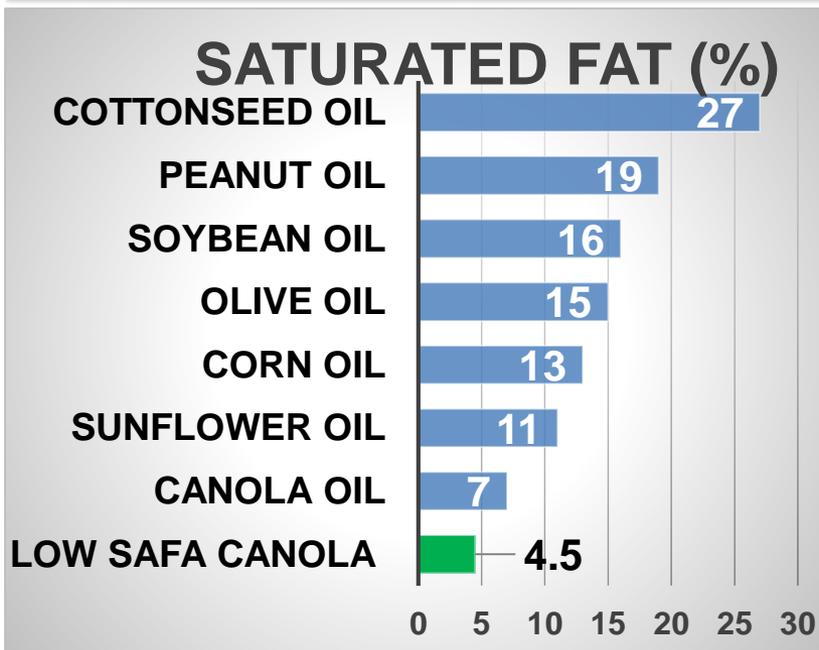
- A year-over-year measurement of consumer awareness related to fats and oils in packaged foods.
- A measurement of how different demographic groups view oil attitudes and usage.
- An indication of how perceptions of oils have changed over the previous year.

“How would these claims impact your likelihood to purchase the product?”



% of people who are extremely/very likely to check the package

# Cargill's Low Saturate High Oleic Oil went Commercial in 2017



# We are not stopping at 4% saturates

## CARGILL DRIVES CONTINUED REDUCTION IN SATURATED FATS

- Build on the current genetic base of 4.5% low saturate commercial frying oil
- Enable customers with a zero saturate claim
- Consistent with the AHA drive to replace saturated fatty with healthier fat
- Targeting 2.5% total saturates in canola
- To achieve this target we have identified new gene targets as illustrated in this Cargill application

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(54) Title: ENGINEERED NUCLEOTIDE SEQUENCES TO GENERATE DELETION MUTANTS IN PLANTS		

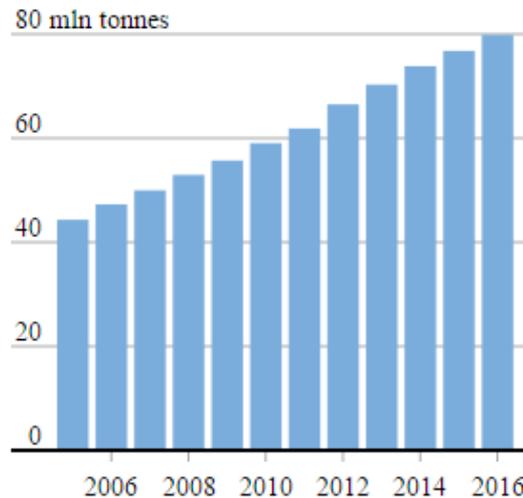
**Changing the world's nutrition in  
a sustainable way:  
EPA DHA Canola for Aqua Feed**

# Alternative Sources of Omega-3 is Critical to Aquaculture

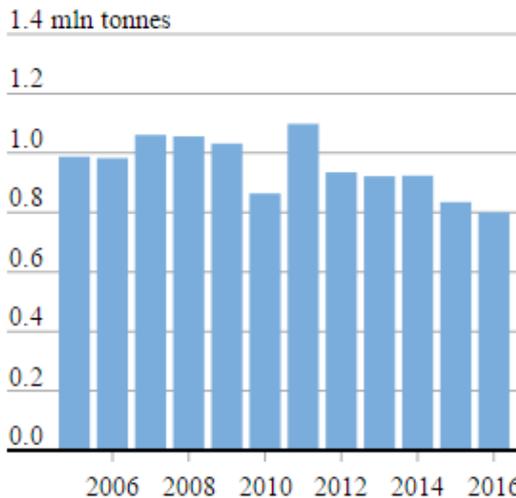
## Booming fish farming drives up fish oil prices

Fish oil key for raising fish, used in health supplements

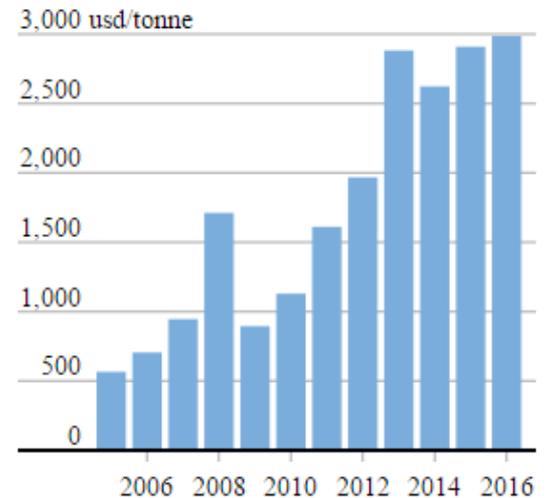
### AQUACULTURE PRODUCTION



### FISH OIL PRODUCTION

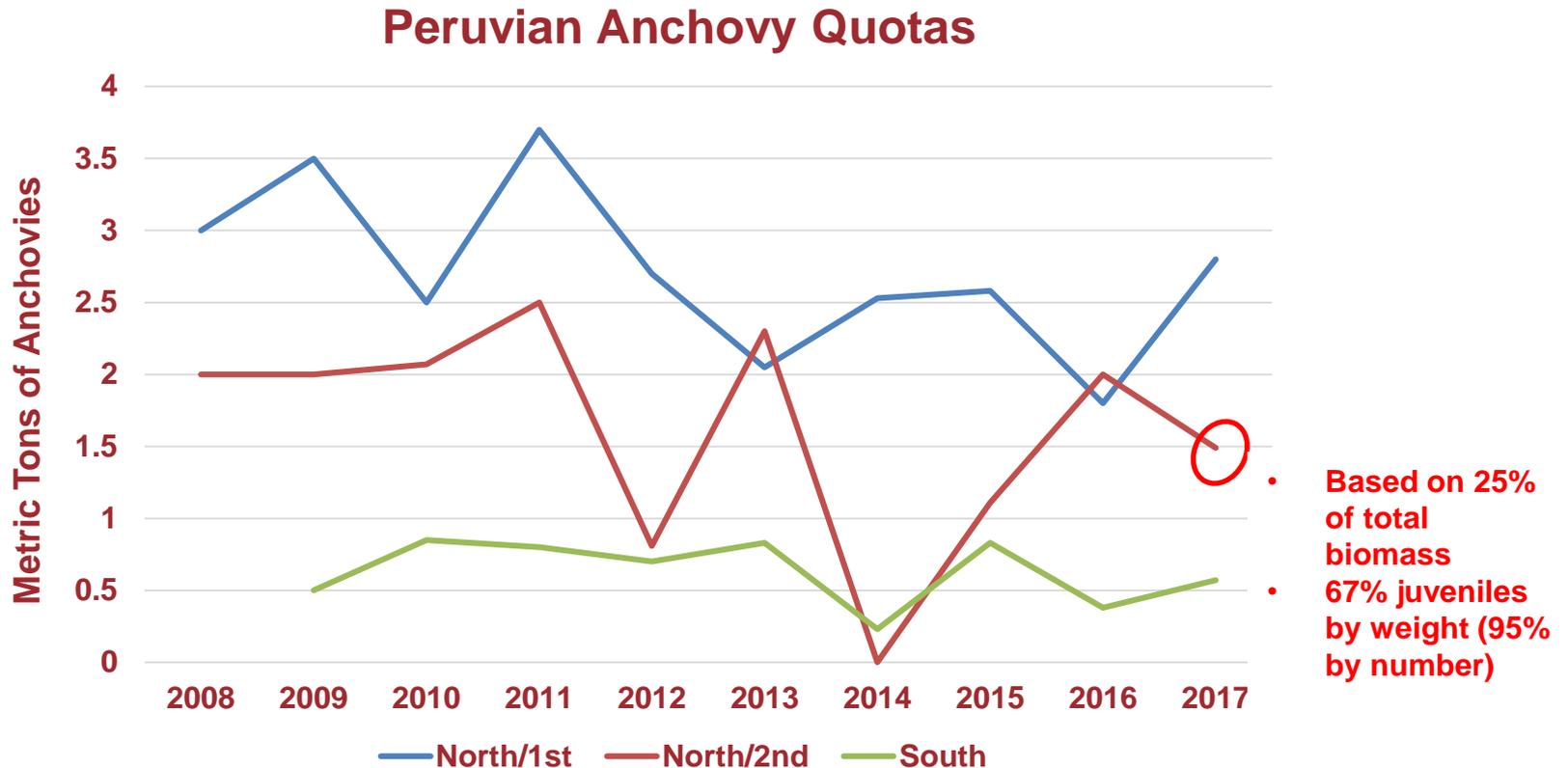


### FISH OIL PRICES

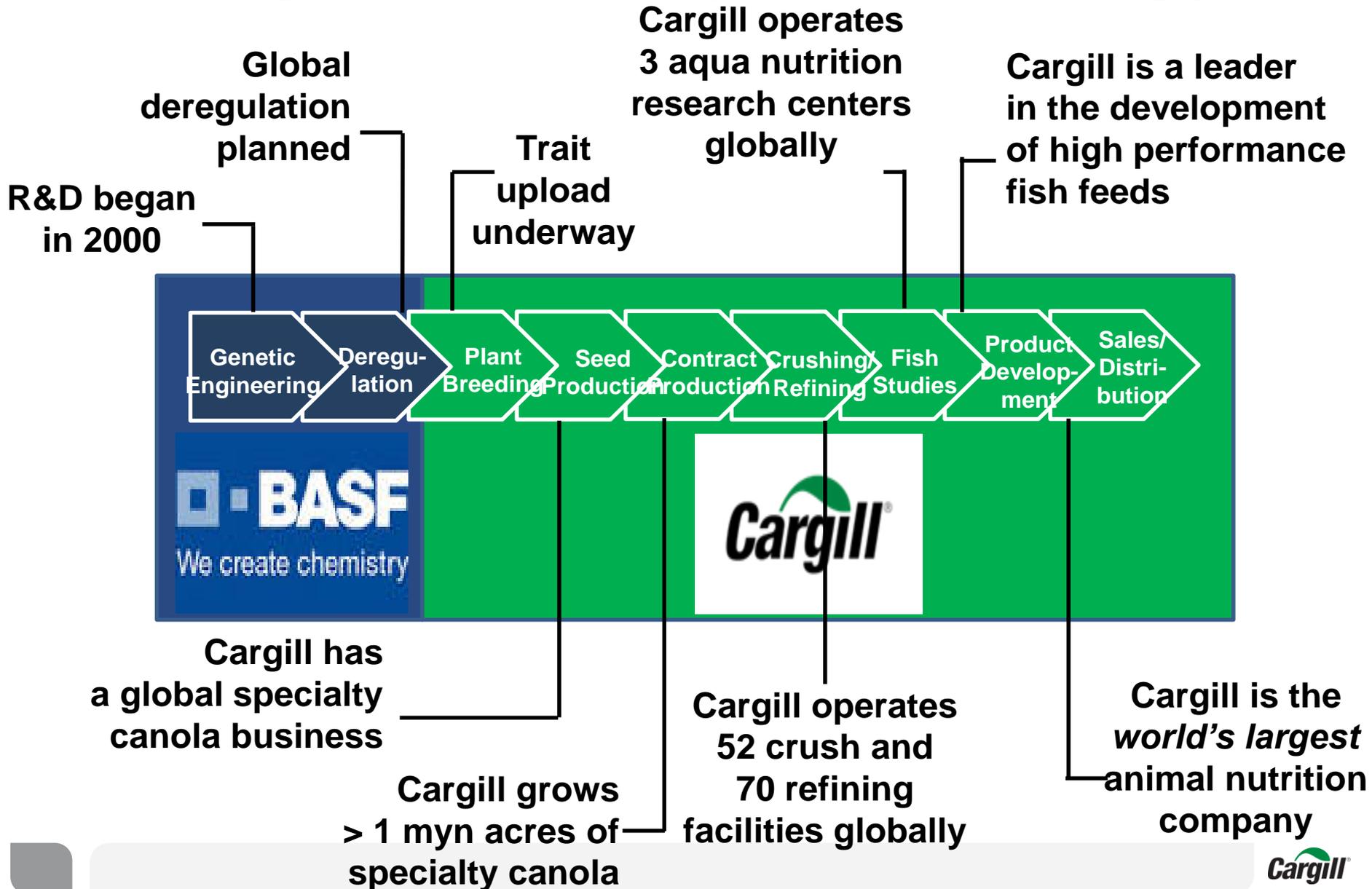


Sources: Rabobank, IFFO, Central Bank of Peru, AquaSol, FAO  
By Matthew Weber | REUTERS GRAPHICS

# Overall Fish Oil Production Declines



# Development of Omega-3 Oil and Supply



# Omega-3 Canola to Launch Soon



Omega-3 canola in August, 2017

Omega-3 canola will drive sustainability by

- reducing harvest pressure on wild fish populations
- providing a rotational alternative to growers in the targeted production area
- ensuring inexpensive, nutritious and delicious seafood for global populations

# Fish Oil May be Optional for Aqua Feed

Feeding test conducted in Chile with identical levels of long chain omega-3's from either fish oil or omega-3 canola oil produced comparable results.



[Dolphin Video](#)

# 25+ Years of Innovation in Canola

**NO TRANS FAT, LOW SATURATED FAT, LONG SHELF LIFE, IN FOOD AND NOW OMEGA-3 IN FEED**

1991 Clear Valley® 65 High Oleic Canola  
1993 Clear Valley® 75 High Oleic Canola  
2010 Clear Valley® 80 High Oleic Canola  
2017 **Low Saturate High Oleic Canola**  
2020 **EPA - DHA Canola**



The Cargill logo features a green, curved leaf-like shape above the word "Cargill" in a bold, italicized, black sans-serif font. A registered trademark symbol (®) is located at the end of the word.

***Cargill***®