



Development of canola with long chain Omega-3 oils

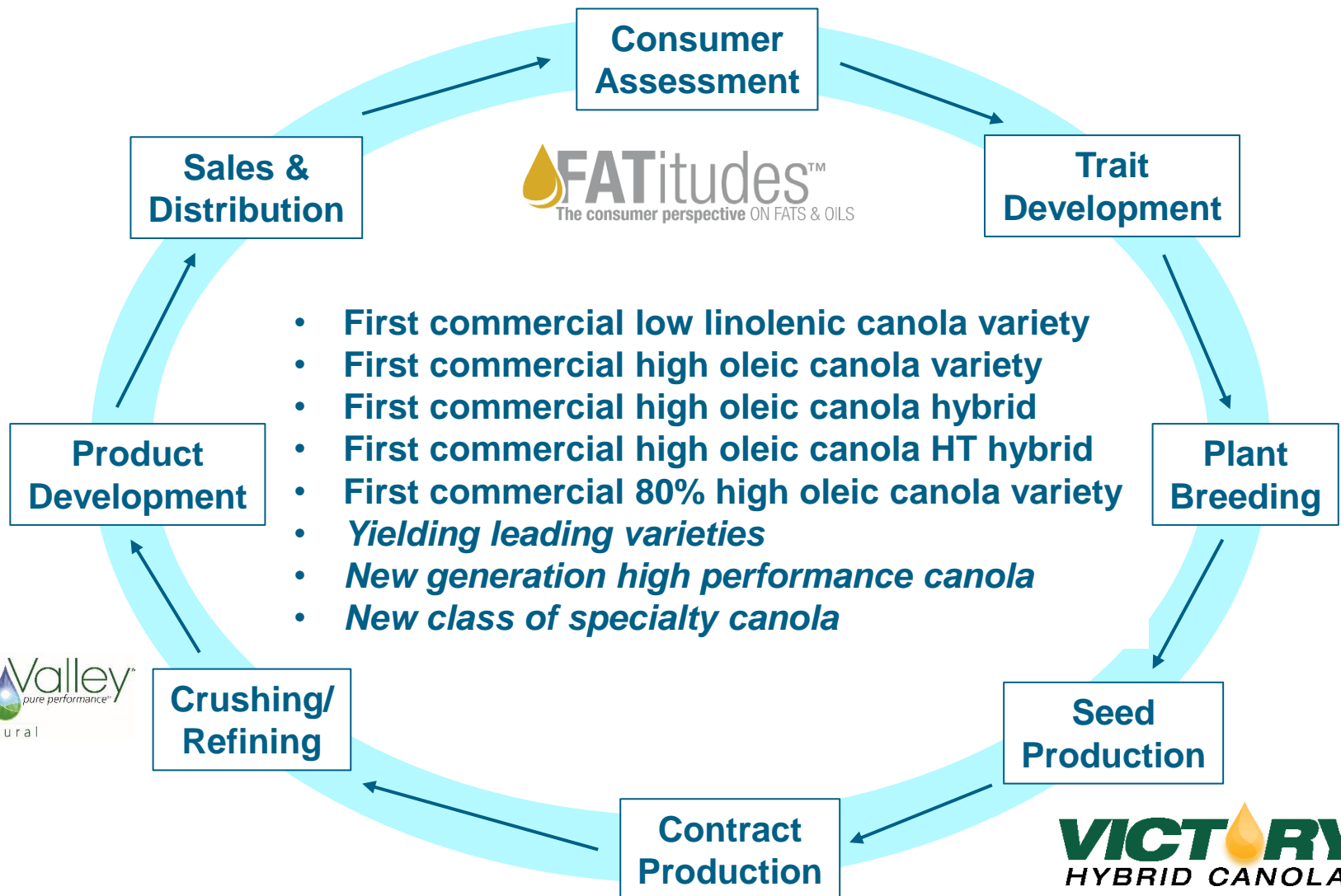


Xinmin Deng & Lorin DeBonte, Cargill Inc.

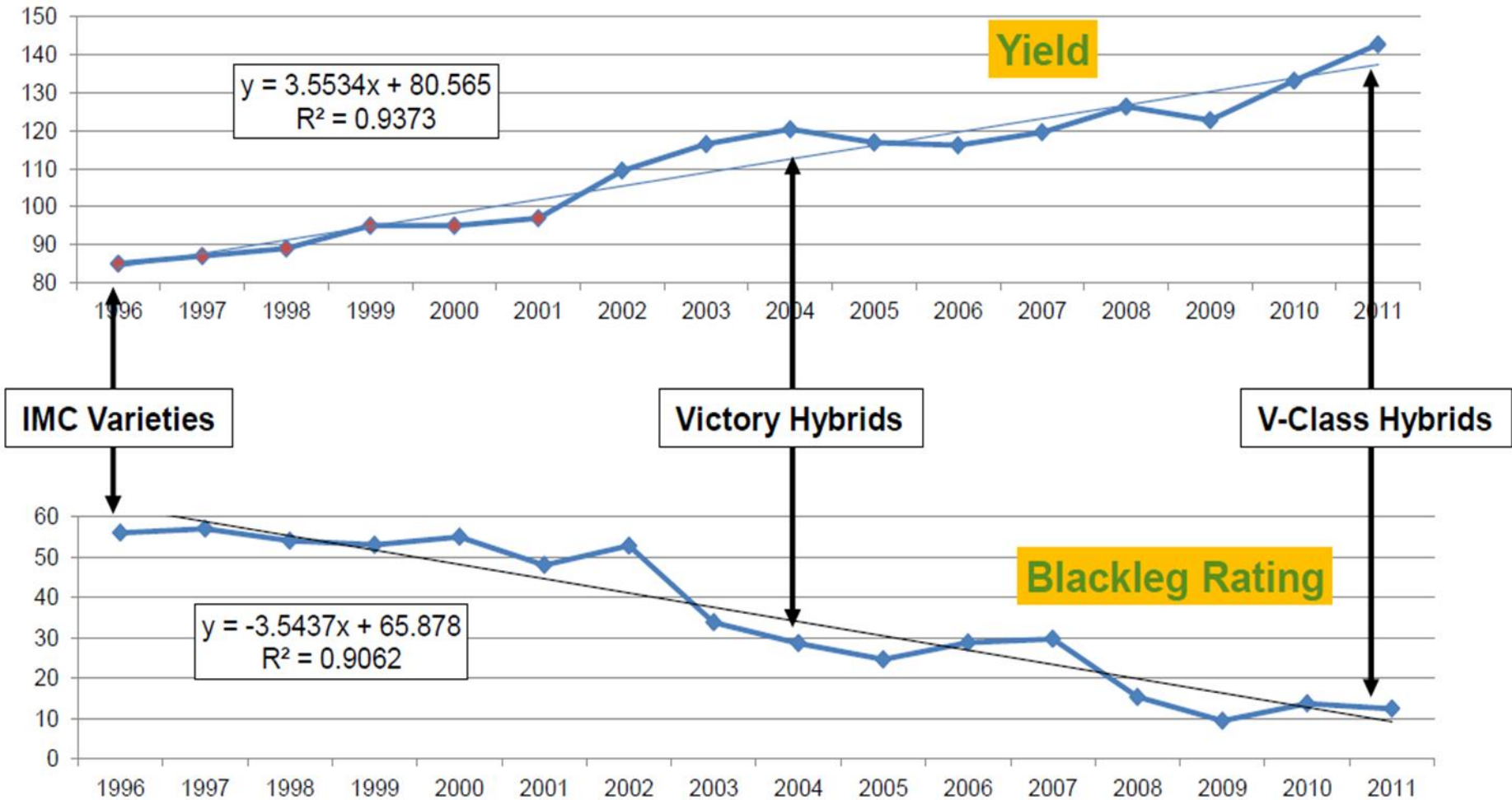
GCIRC technical meeting, May 9, 2017

Malmö / Sweden

A Business Model Built on Innovation



Specialty Oils Must Be Affordable



Specialty Varieties are Yield Leading

Hybrid	Release Date	Vs Industry Checks	Blackleg Rating	Remark
V12-1	2011	133% of 46A65 and Q2	13.7% of Westar (top 5)	Multiple Blackleg R genes
V12-3	2015	98% of 5440 and 45H29	24.9% of Westar (top 25)	Multiple Blackleg R genes: CR Races 2, 3, 5, 6, 8
V14-1	2016	105% of 5440 and 45H29	17.3% of Westar (top 5)	Multiple Blackleg R genes: CR Races 2, 3, 5, 6, 8

Omega-3 Canola Breeding and Production Center

4401 Innovation Street, Great Falls, MT

18,000 ft² Breeding & Production station

- Regulatory compliance and stewardship
- Breeding
- Agronomy management
- Commercial production
- QA & QC

**Targeted finishing construction
Summer 2017**

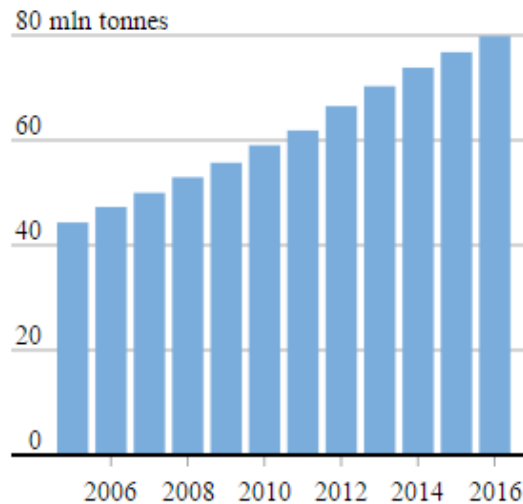


Alternative Sources of Omega-3 is Critical to Aquaculture

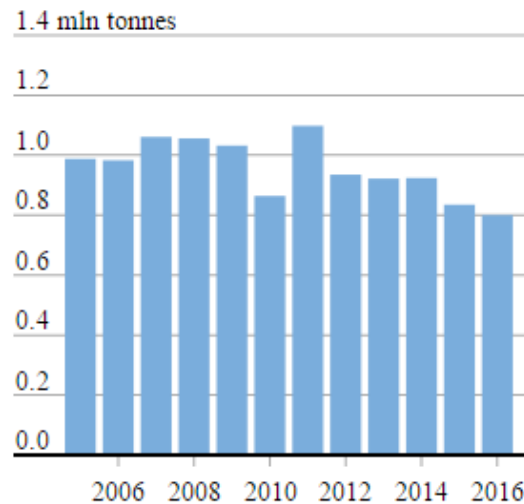
Booming fish farming drives up fish oil prices

Fish oil key for raising fish, used in health supplements

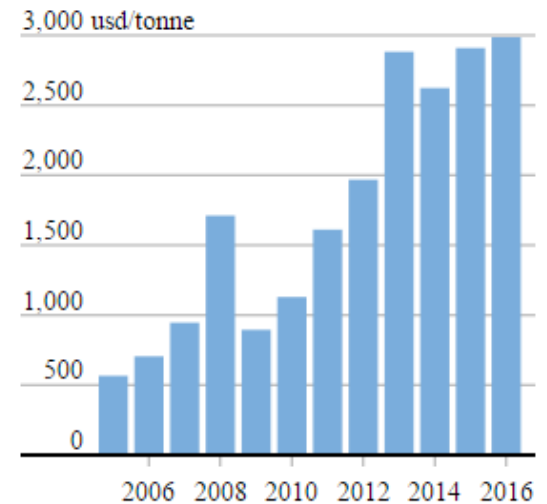
AQUACULTURE PRODUCTION



FISH OIL PRODUCTION

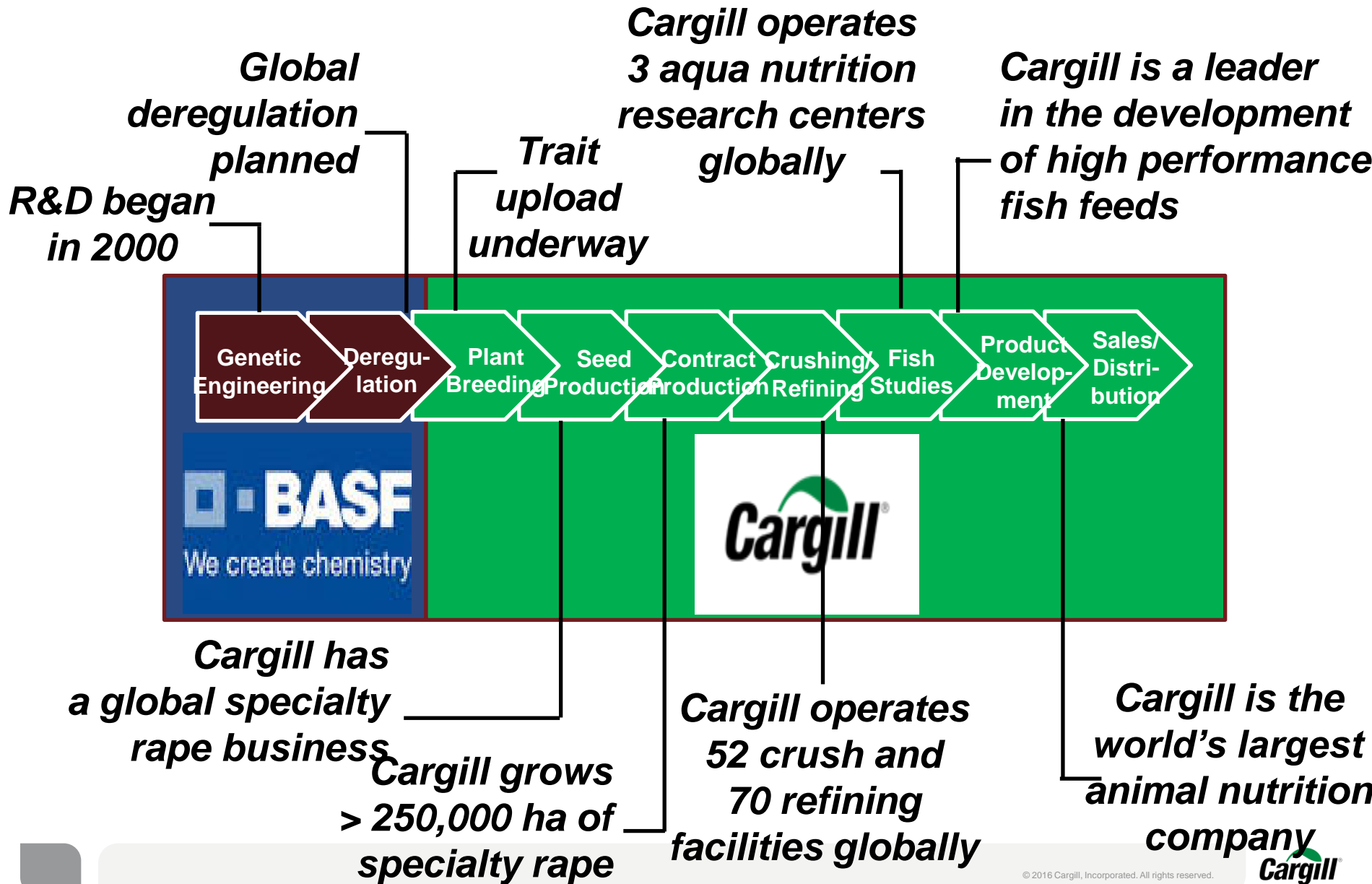


FISH OIL PRICES



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

Development of Omega-3 Rapeseed Oil



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 EPA/DHA canola oil alone produced comparable results.



[Dolphin Video](#)