



Plenish[®] High Oleic Soy

Update for the National Oilseed Processors Association Annual Meeting

Rancho Mirage, CA

February 10, 2016



Plenish[®] Fatty Acid Composition

✓ *Year Over Year Reproducibility*



Historical Compositional Range & OSI Values

	Saturated		Monounsaturated	Polyunsaturated		
	Palmitic Acid	Stearic Acid	Oleic Acid	Linoleic Acid	Linolenic Acid	OSI Hrs.
Commodity Soybean Oil	11	4	22	55	8	5-6
Plenish [®] High Oleic Soy ¹	6.5	4	76	8	2	28

- ✓ Minimal FAC fluctuation during atypical years of extreme environmental stress (e.g. cold, wet)
- ✓ More consistent protein and oil content relative to industry targets and commodity varieties
- ✓ NIR calibration consistent with GC analysis for oleic and linolenic content

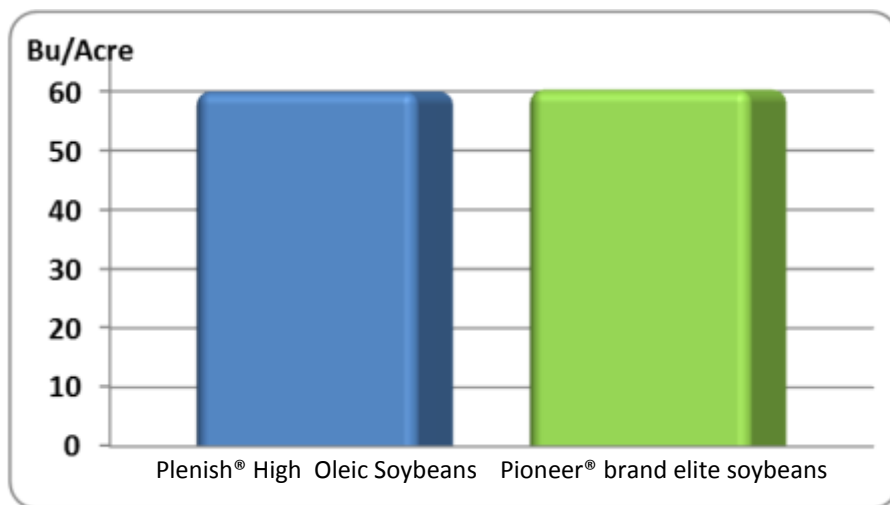
¹ 2010-2015 average for commercial RBD samples

Soybean Economics & Supply Chain Reliability

- +80 MM acre, geographically diverse US soybean production base a powerful advantage in reducing supply chain risk, transportation uncertainty and assuring reliable supply
- Success in developing high yielding, agronomically strong seed products to keep growers engaged and chain costs low



Plenish® High Oleic Soybean Yield Data Summary



Source: Pioneer research plot yield data from 723 observations in Indiana and Ohio depicting an average yield on Plenish® high oleic soybean commercial varieties compared to average yield of Pioneer® brand elite soybean checks in 2011 – 2015.

Higher Income per Acre Growing Plenish® High Oleic Soybeans

Grower Premium¹ Income

Per acre	\$27.00
200 acres	\$5,400
1,000 acres	\$27,000

Based on 2011-15 yield data (60 bu. average) and \$0.45 per bu. processor paid high oleic premium.

¹ Grower premiums already at a lower level than low-lin at its steady-state

Plenish® Status

- **Commercially grown since 2012 under soft IP stewardship**
- **Except for the EU stack, deregulation is complete in all major markets for US bean and meal exports**
- **Partnerships with U.S. processors where seed product fits:**
 - ADM, AGP, Bunge, Cargill and Perdue Agribusiness
- **Strong platform growth:**
 - Exceeded initial 2016 target acreage given increased grower interest and downstream demand growth
 - 2016 crop approximately 450,000 acres will be planted
(Illinois, Indiana, Michigan, Ohio, Nebraska, Pennsylvania, Delaware, Maryland and New Jersey)
- **Accelerating rate of oil adoption with end-users**



Benefits in Multiple Product Categories

Improved Oil for Food Production

- Longer Fry Life
- Longer Shelf Life
- Improved Flavor
- Blend opportunities



Lower Saturate Shortenings

- EIE products



Improved Yield and Functionality of Protein Isolates



Better Lubricants & Industrial Fluids



- Environmentally friendly
- Heat & oxidative stability
- Oleic purity / better uniformity

Better Lecithin Attributes

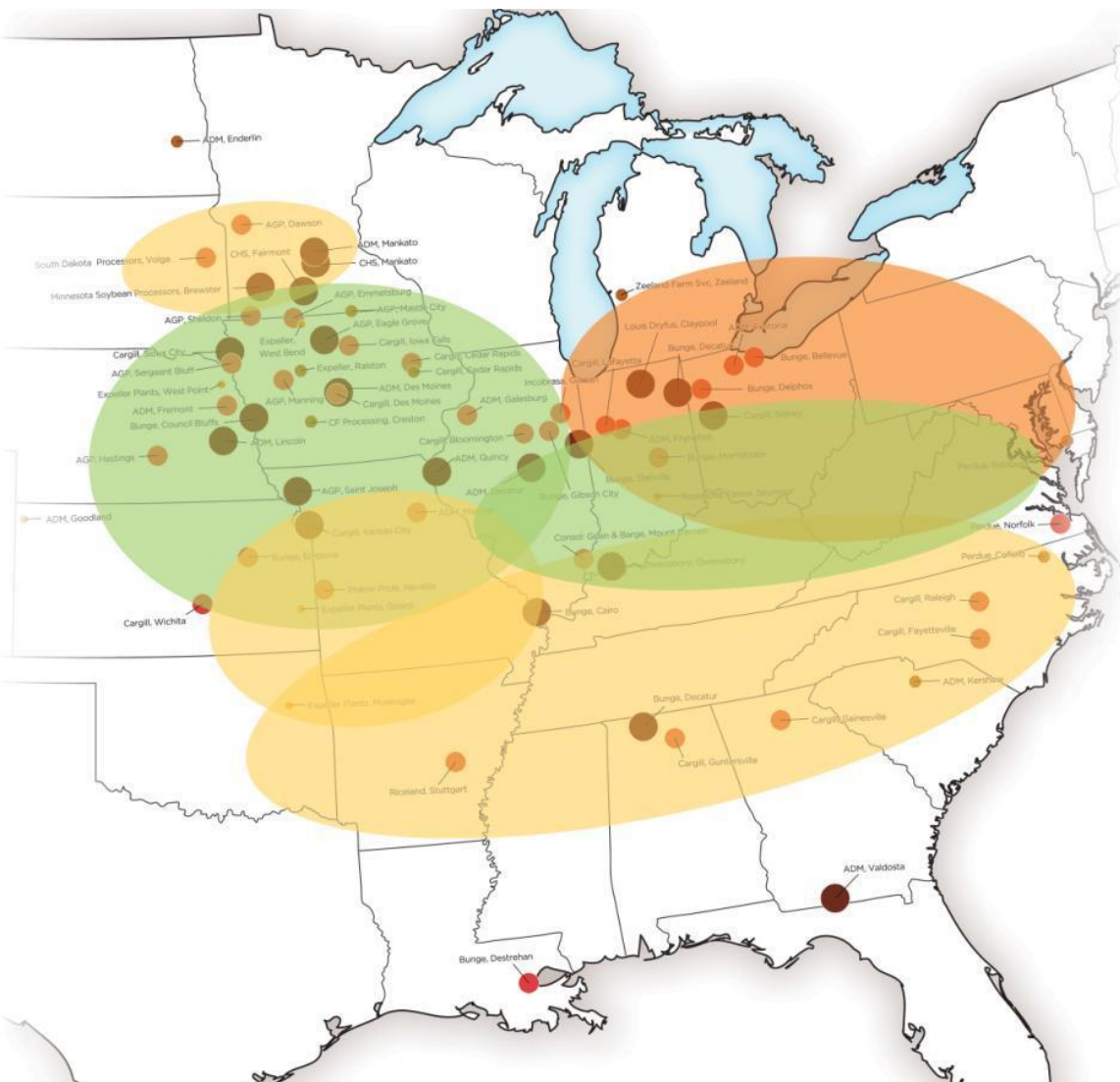


Nestlé's Reformulation of Liquid Coffee-Mate®

- Successfully replaced PHO while maintaining product quality
- No compromise on taste and consumer acceptance
- First major multinational food company requiring large scale commercialization of high oleic soy oil
- Eliminated 22 million pounds of pure trans fats in 2015
- High grower interest in downstream connectivity



Plenish® Rollout



Plenish® Trait Integration

Stage 1 - 2013 & 14

RM 2-3 adapted for east of Miss. River

Stage 2 - 2015 & 16

RM 2-3 adapted for west of Miss. River

Stage 3 - 2017 & 18

RM 1 & 4-5 commercialized



USB leadership is enabling long-term market growth via:

- High Oleic Seed Initiative
- Grower Engagement
- Downstream Market Development

The Critical Must Haves for High Oleic Soy's Success

Major national food brands demand reliable, large volume supplies at an attractive price

- 1) Cost position must be superior to competitive oils
- 2) Attractive economics for all chain stakeholders
- 3) Seed products on par with elite commodity
- 4) Trait stability in variable growing environments
- 5) Growers want friendly & hassle-free IP systems
- 6) Crush plant infrastructure to handle a second bean
- 7) Timing & synchronization of the supply chain



Looking Forward...

Pivotal time as we enter the next chapter for High Oleic Soy

We now have:

- ✓ Oil that meets the industry's needs & can compete / outperform competition
- ✓ Seed products & depth of offering that are attracting grower conversion
- ✓ Starting to attain critical mass in the supply chain that will lead to economies of scale
 - Build downstream confidence in supply reliability
 - Demonstrate a mainstream price structure versus a specialty niche product





plenish[®]
High Oleic Soybean Oil

the re-invention
of soybean oil

More information at
www.plenish.com