calyxt®

Nature inspired.
Technology driven.

WORKSHOP: Overview and introduction of Calyxt High Oleic Soybean

JUNE 8, 2021
SPECIALTY CROP REGULATORY ASSISTANCE

CHLOE PAVELY, GLOBAL REGULATORY DIRECTOR

Agenda

Overcoming Today's Challenges

Technology Platform

High Oleic Soybean Opportunities

Path Forward

© CALYXT, INC. ALL RIGHTS RESERVED

Forward-Looking Statements

We have made these forward-looking statements in reliance on the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. In some cases, you can identify these statements by forward-looking words such as "anticipates," "believes," "continue," "estimates," "expects," "targets," "intends," "may," "might," "plans," "potential," "predicts," "projects," "should," or "will," the negative of these terms and other similar terminology. Forward-looking statements in this presentation include statements about the potential impact of the COVID-19 pandemic on our business and operating results; our future financial performance; product pipeline and development; our business model and strategies for commercialization and sales of commercial products; regulatory progression; potential collaborations, partnerships and licensing arrangements and their contribution to our financial results, cash usage, and growth strategies, including with respect to potential revenue relating to our winter oats, high saturated fat soybean for palm alternative, hemp, high oleic low linolenic soybean, high fiber wheat and improved quality alfalfa; addressable market opportunities; and anticipated trends in our business. These and other forward-looking statements are predictions and projections about future events and trends based on our current expectations, objectives and intentions and premised on current assumptions. Our actual results, level of activity, performance, or achievements could be materially different than those expressed, implied, or anticipated by forward-looking statements due to a variety of factors, including, but not limited to: the severity and duration of the evolving COVID-19 pandemic and the resulting impact on macro-economic conditions; the impact of increased competition, including with respect to our winter oats, high saturated fat soybean for palm alternative, hemp, high oleic low linolenic soybean, high fiber wheat and improved quality alfalfa; disruptions at our or our collaborators' key facilities; changes in customer preferences and market acceptance of our or our partners' products, including our winter oats, high saturated fat soybean for palm alternative, hemp, high oleic low linolenic soybean, high fiber wheat and improved quality alfalfa; competition for collaboration partners and licensees and the successful execution of collaborations and licensing agreements, including on terms consistent with our projections; the impact of adverse events during development, including unsuccessful field trials or development trials or disruptions in seed production; the impact of improper handling of our product candidates by unaffiliated third parties during development, such as the improper aerial spraying of our high fiber wheat product candidate; failures by third-party contractors; inaccurate market sizing and/or price and demand forecasting, including with respect to sales projections used by Calyxt management in determining potential license and other revenues; the effectiveness of commercialization efforts by commercial partners or licensees; our ability to make grain sales on terms acceptable to us; the timing of our grain sales; our ability to collect accounts receivable; disruptions to supply chains, including transportation and storage functions; commodity price conditions; the impact of changes or increases in oversight and regulation; disputes or challenges regarding intellectual property; proliferation and continuous evolution of new technologies; management changes; dislocations in the capital markets; and other important factors discussed under the caption entitled "Risk Factors" in our Annual Report on Form 10-K and subsequent filings on Form 10-Q or 8-K with the U.S. Securities and Exchange Commission. Any forward-looking statements made by us are based only on information currently available to us when, and speaks only as of the date, such statement is made. Except as otherwise required by securities and other applicable laws we do not assume any obligation to publicly provide revisions or updates to any forward-looking statements, whether as a result of new information, future developments or otherwise, should circumstances change.

© CALYXT, INC. ALL RIGHTS RESERVED

OVERCOMING TODAY'S CHALLENGES

© CALYXT, INC. ALL RIGHTS RESERVED

Calyxt

- Founded in 2010, Roseville, Minnesota
- Technology company with a mission to deliver disruptive plant-based innovations across industries including food, pharmaceutical, energy, agriculture, and more.
- Calyxt's innovations are targeted to deliver substantial benefits to its customers to address unmet consumer, sustainability and marketplace demands.

© CALYXT, INC. ALL RIGHTS RESERVED

The Future Demands Healthy and Sustainable Innovation

PLANT-BASED SOLUTIONS

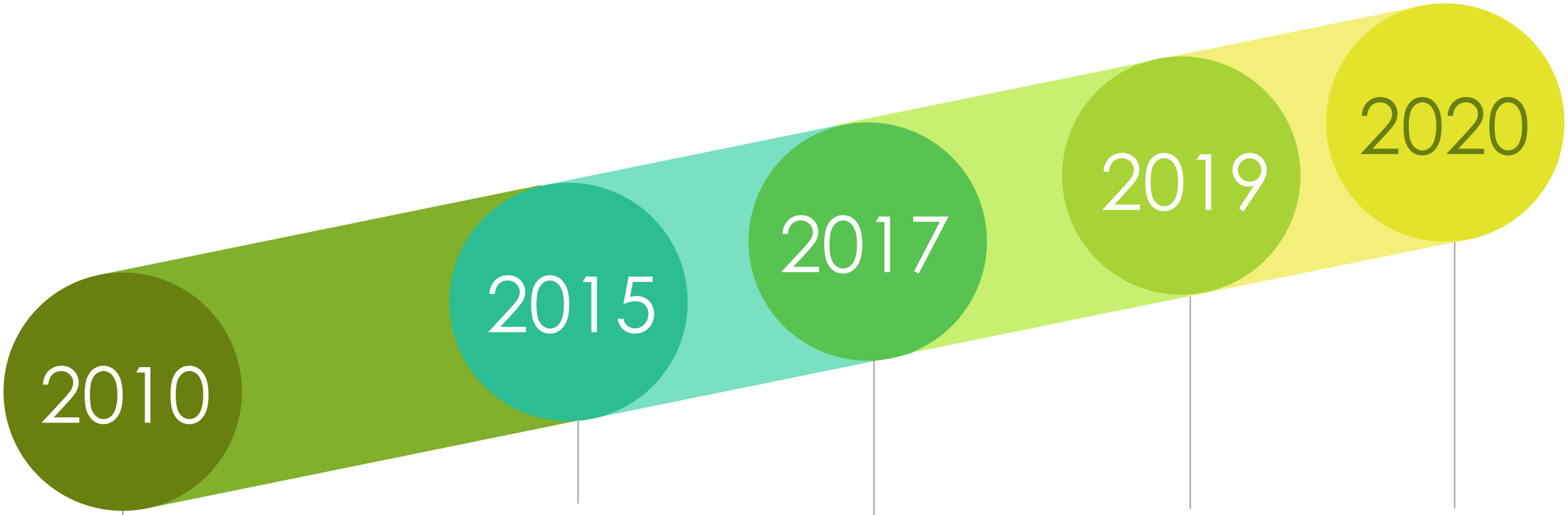
- Regenerative Agriculture
- Advanced Therapeutics
- Functional Nutrition
- Plant-Based Protein
- Plant-Based Packaging
- Green Building Materials
- Animal Nutrition
- Renewable Clean Energy

TALEN®

© CALYXT, INC. ALL RIGHTS RESERVED

Historical Milestones

calyxt®



Founded

Received USDA non-regulated status for Calyxt's first commercial product

IPO

Launched first gene-edited food product in the U.S.

Advanced go-to-market strategy for soybean products

© CALYXT, INC. ALL RIGHTS RESERVED

TECHNOLOGY PLATFORM

© CALYXT, INC. ALL RIGHTS RESERVED

Technology Overview

GENE EDITING IS A PRECISION PLANT BREEDING TOOL

Natural Process	Plant Breeding	Precision Plant Breeding
• Mutations or deletions • Naturally occurring at high frequency • Selected by nature • May be inherited	• Mutations or deletions • **Mimics processes that occur in nature** • Selected by breeders • Stably inherited after many generations	• Mutations or deletions • **Mimics processes that occur in nature** • Selected by breeders • Stably inherited after a few generations
Decades or longer	**Decades**	**3 to 6 years**

© CALYXT, INC. ALL RIGHTS RESERVED

calyxt®

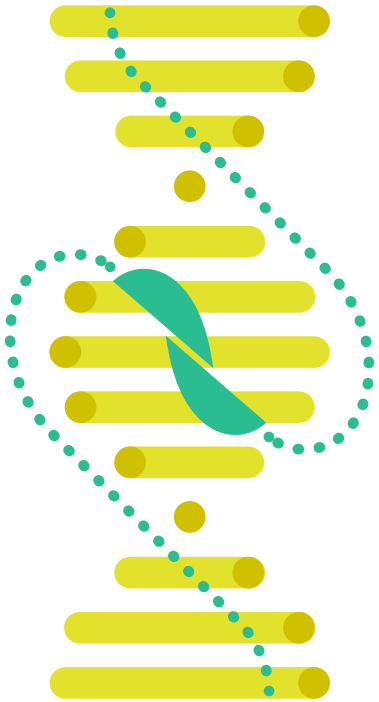
TALEN®

Transcription Activator-Like Effector Nuclease (TALEN®) gene-editing technology is the engine behind our innovation.

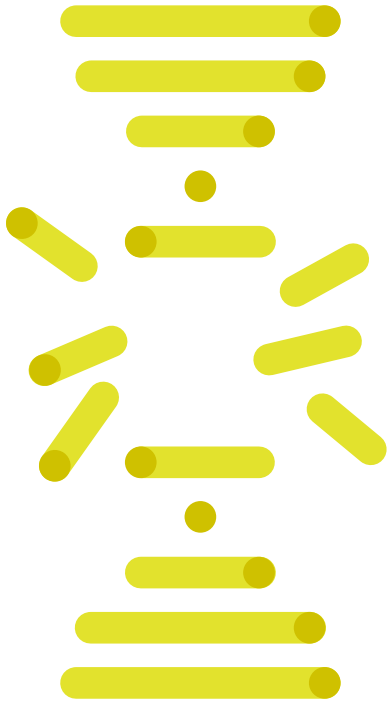
© CALYXT, INC. ALL RIGHTS RESERVED

TALEN® gene-editing process

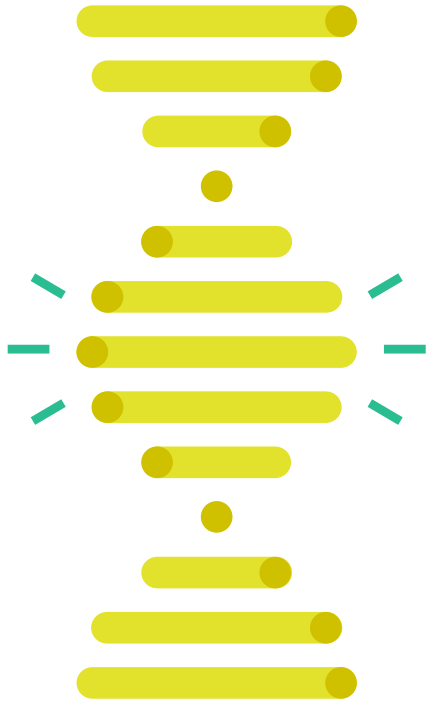
Two TALEN® recognize their DNA target



A controlled cut is induced in the gene-of-interest



DNA repairs itself



After repair, DNA target is no longer present (knocked-out)

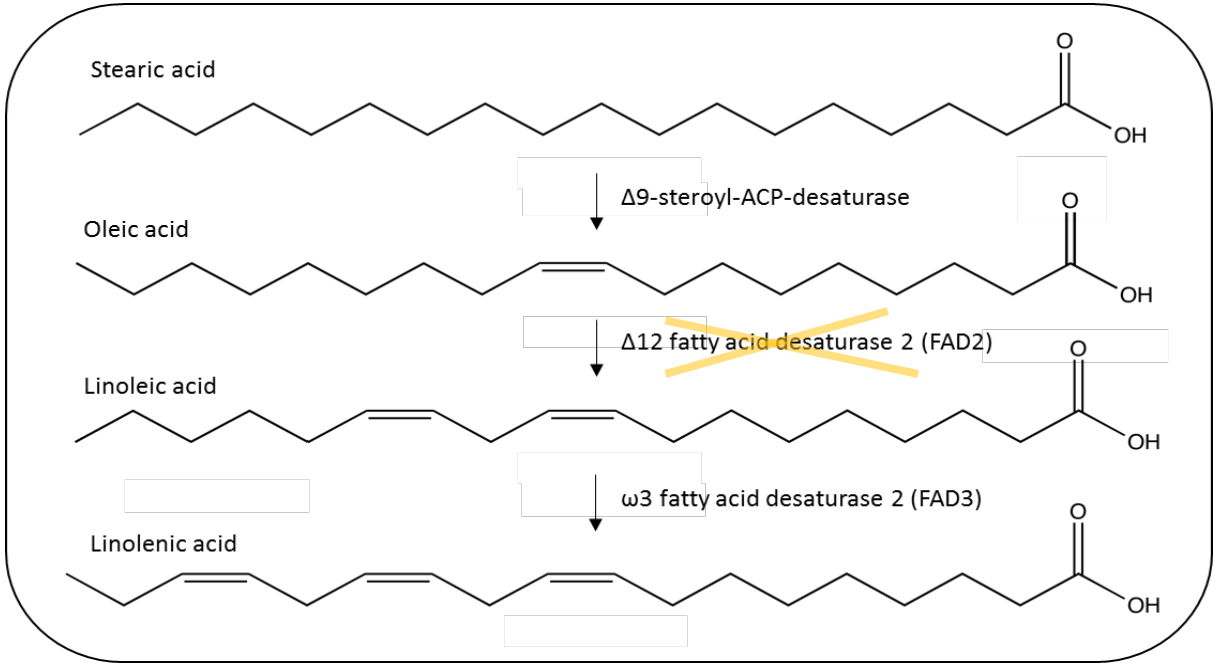
© CALYXT, INC. ALL RIGHTS RESERVED

HIGH OLEIC SOYBEAN OPPORTUNITIES

© CALYXT, INC. ALL RIGHTS RESERVED

High Oleic Soybean

BIOSYNTHETIC PATHWAY



© CALYXT, INC. ALL RIGHTS RESERVED

Calyxt High Oleic Soybean Oil

OILS COMPARISON**

(% fat)	Oleic (18:1)	Linoleic (18:2)	Linolenic (18:3)	Saturates
High Oleic Sunflower	84%	6%	0%	10%
Calyxt® High Oleic Low Linolenic Soybean*	80%	5.5%	<1.5%	13%
Calyxt® High Oleic Soybean	**80%**	**4%**	**4%**	**12%**
Plenish® High Oleic Soybean	76%	7%	2%	12%
Olive	75%	9%	1%	15%
High Oleic Canola	70%	20%	3%	7%
Canola	61%	21%	11%	7%
Soybean	23%	54%	8%	15%

*Average from Calyxt 2021 preliminary development trials
**Oil data from http://www.canolacouncil.org/ and http://extension.okstate.edu
Calyxt® is a registered trademark of Calyxt, Inc. All other trademarks belong to their respective owners.

† "WHO plan to eliminate industrially-produced trans-fatty acids from global food supply" May 14, 2018
http://www.who.int/news-room/detail/14-05-2018-who-plan-to-eliminate-industrially-produced-trans-fatty-acids-from-global-food-supply

calyxt®

Regulatory background:

- FDA ban all trans fats from the food chain in the US in 2018
- WHO announced strategic plan to ban trans fats from the global food supply by 2023†

High Oleic Soybean Oil:

- Zero grams trans fat per serving
- Improved oil profile, similar to olive oil
- Up to 3x increased fry-life
- Neutral taste, ideal for food applications

© CALYXT, INC. ALL RIGHTS RESERVED

Product Evaluation

POTENTIAL IMPACT ON FOOD/FEED/ENVIRONMENTAL SAFETY

- **Characterization and assessment of key data**
  - Molecular assessment
  - Compositional and nutritional assessment
  - Agronomic and phenotypic assessment
- Demonstration of **no foreign DNA**, **no off-target** mutations and putative truncated proteins **not related to known allergens or toxins**.
- The only identified difference is the **fatty acid profile**, which falls outside conventional soybean ranges, but is similar to other varieties already commercially produced and consumed.
- High Oleic oil is not associated with any known health risks – in fact is considered to be a **healthier product**.
- Nutritional components of **animal feeds are not affected** by the change.
- The trait has **no impact on environmental risk factors**.

© CALYXT, INC. ALL RIGHTS RESERVED

Regulatory Consultation: USDA

calyxt®

- **Process**
  - USDA voluntary consultation under 7 CFR part 340 "Am I Regulated?" process (and under SECURE rule going forward)
- **Information for consultation**
  - Description of edit(s) and resulting trait
  - Confirmation of no foreign DNA (including no plant pest)
- **Format**
  - Format: regulatory scope assessment
  - Submission: letter with statements
  - Duration of USDA review: a few months

  → UDSA conclusion: Calyxt High Oleic Soybean is not regulated articles per 7 CFR part 340 (May 5, 2015)

© CALYXT, INC. ALL RIGHTS RESERVED

Regulatory Consultation: FDA

calyxt®

- **Process**
  - FDA voluntary consultation under 1992 Statement of Policy: Foods Derived from New Plant Varieties
- **Information for consultation**
  - Description of edit(s) and resulting trait
  - Confirmation of no foreign DNA, no off-targets, not allergen or toxin
  - Confirmation of trait-related composition profile similar to conventional control and published values, except for intended fatty acid change
- **Format**
  - Format: evaluation of developer's safety & nutritional assessment
  - Submission: dossier with statements supported by summary data
  - Duration of FDA review: ~ a year
  - → FDA conclusion: FDA has no further questions on the safety of Calyxt High Oleic Soybean (February 26, 2019)

© CALYXT, INC. ALL RIGHTS RESERVED

Launching HO Soybean

PATH TO MARKET

- **Voluntary regulatory consultations**
  - ✓ USDA consultation
  - ✓ FDA consultation
- **Product claims development**
- **Identity-preserved process**
  - Supply chain partnerships
  - Traceability and quality systems
- **Product launch → Feb. 2019**

© CALYXT, INC. ALL RIGHTS RESERVED

Identity-Preserved Supply Chain

SEED PRODUCTION

Seed tracking

GRAIN PRODUCTION

Seed tracking
Field selection
Equipment clean out

GRAIN PROCESSING

Equipment clean out
Labeling
Grain sampling and testing

PRODUCT SALES

Traceable

Identity-Preserved Supply Chain

© CALYXT, INC. ALL RIGHTS RESERVED

Benefits of HO Soybean Oil

HEALTH

Heart-healthy*
0 grams trans fat per serving

PERFORMANCE

Up to 3x fry life vs. commodity soybean oils

SUSTAINABLE

Grown by U.S. farmers and locally processed

TRACEABLE

Identity-preserved supply chain

*One serving of Calyxt High Oleic Soybean oil provides 16 grams of oleic acid (which is 16.3 grams of monounsaturated fatty acid).
Supportive but not conclusive scientific evidence suggests that daily consumption of about 1½ tablespoons (20 grams) of oils containing high levels of oleic acid, may reduce the risk of coronary heart disease. To achieve this possible benefit, oleic acid-containing oils should replace fats and oils higher in saturated fat and not increase the total number of calories you eat in a day.

© CALYXT, INC. ALL RIGHTS RESERVED

PATH FORWARD

© CALYXT, INC. ALL RIGHTS RESERVED

Robust Portfolio of Industry Innovations

BRINGING SOLUTIONS TO THE MARKET

Winter Oats

High Saturated Fat Soybean for Palm Alternative

Hemp

High Oleic Low Linolenic Soybean

High Fiber Wheat

Improved Digestibility Alfalfa

© CALYXT, INC. ALL RIGHTS RESERVED

Changing Crops to Grow in a Changing World

$18.7B

In 2018, the global market for plant-based meat alternatives (PBM) was valued at $18.7B.[1]

77%

of Gen Z consumers will eat tech-assisted food[2]

Nearly 70%

of respondents indicate they would pay a premium for food products in the natural, ethical, enhanced or less of categories. [3]

1 Wells Fargo Equity Research, 2019
2 Ketchum Food Tech Consumer Perception Study. 2019
3 L.E.K. Consumer Food and Beverage Study, 2018\4 2017 Census of Agriculture, 2017

© CALYXT, INC. ALL RIGHTS RESERVED

Path Forward

- Gene editing offers the **opportunity to bring consumer-focused and sustainable products to market** in a few years (versus decades for conventional breeding)
- **Product safety is paramount** and is carried out by applying high standards of plant breeding and selection generated by decades of industry experience
- **Synchronous global approvals** are critical to avoid unnecessary trade disruptions
  - Predictability of data requirements is critical for developers
  - Timeliness of reviews is critical
- **US agencies' importance**
  - Global regulatory influencers
  - Key market for global commodity and food/feed trade
- Calyxt High Oleic Soybean is 1st gene edited food product and **many more innovative, consumer & sustainability-focused products** in pipeline

© CALYXT, INC. ALL RIGHTS RESERVED

THANK YOU!

To learn more, visit calyxt.com

© CALYXT, INC. ALL RIGHTS RESERVED