UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

Calyxt, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization) 27-1967997 (I.R.S. Employer Identification No.)

2800 Mount Ridge Road
Roseville, MN 55113
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Calyxt, Inc. 2017 Omnibus Incentive Plan (Full title of the plan)

James A. Blome
Chief Executive Officer
2800 Mount Ridge Road
Roseville, MN 55113
(Name and Address of Agent for Services)

(651) 683-2807 (Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Boris Dolgonos Peter E. Devlin Jones Day 250 Vesey Street New York, NY 10281 (212) 326-3939

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer		Accelerated filer	X			
Non-accelerated filer		Smaller reporting company				
		Emerging growth company	X			
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section $7(a)(2)(B)$ of the Securities Act.						

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.0001 par value, to be issued under the				
Omnibus Plan	2,832,445 (2)	\$15.20 (3)	\$43,053,164	\$5,218.04

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of the Registrant's common stock, \$0.0001 par value per share ("Common Stock") that become issuable under the 2017 Omnibus Incentive Plan (the "Omnibus Plan") by reason of any stock dividend, stock split, recapitalization or similar transactions.
- (2) Represents additional shares of Common Stock previously authorized for issuance under the evergreen provision of the Omnibus Plan.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and (h) under the Securities Act, based upon the average of the high and low prices of the registrant's common stock as reported on the NASDAQ Global Market on May 6, 2019.

REGISTRATION OF ADDITIONAL SECURITIES PURSUANT TO GENERAL INSTRUCTION E

Pursuant to General Instruction E to Form S-8, this Registration Statement is being filed for the purpose of registering an additional 2,832,445 shares of the Registrant's Common Stock authorized for issuance under the Registrant's 2017 Omnibus Incentive Plan, which is the same class as the securities previously registered on an effective Form S-8 filed with the Securities and Exchange Commission on July 20, 2017 (File No. 333-219382) (the "2017 Registration Statement"), and the contents of the 2017 Registration Statement are incorporated by reference into this Registration Statement.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The following documents filed by the Registrant with the Securities and Exchange Commission (the "Commission") are incorporated by reference into this Registration Statement:

- (a) Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Commission on March 12, 2019 (including the information in Part III incorporated therein by reference from our Definitive Proxy Statement on Schedule 14A filed with the Commission on April 22, 2019);
- (b) Quarterly Report on Form 10-Q for the quarter ended March 31, 2019, filed with the Commission on May 8, 2019;
- (c) Current Reports on Form 8-K filed with the Commission on January 3, 2019, January 24, 2019, February 20, 2019 and February 26, 2019; and
- (d) the description of our common stock contained in the Registration Statement on Form 8-A filed with the Commission on July 20, 2017, including any amendment or report filed for the purpose of updating such description.

In addition, all other reports and documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such reports or documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein (or in any subsequently filed document that also is deemed to be incorporated by reference herein), modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8. Exhibits

Exhibit

No.	Description of Exhibit
5.1	Opinion of Jones Day (filed herewith).
23.1	Consent of Ernst & Young LLP (filed herewith).
23.2	Consent of Jones Day (included in Exhibit 5.1).
24.1	Power of attorney (included in the signature page to this Registration Statement).
99.1	Calyxt, Inc. 2017 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.20 to the Company's Registration Statement on Form S-1 filed on July 3, 2017 (File No. 333-218924)).
99.2	<u>Calyxt, Inc. 2017 Stock Option Sub-Plan for French Employees and Directors (incorporated herein by reference to Exhibit 10.21 to the Company's Registration Statement on Form S-1 filed on July 3, 2017 (File No. 333-218924)).</u>
99.3	<u>Calyxt, Inc. 2017 Restricted Stock Unit Sub-Plan for French Employees and Directors (incorporated herein by reference to Exhibit 10.25 to the Company's Registration Statement on Form S-1 filed on July 3, 2017 (File No. 333-218924)).</u>

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Roseville, State of Minnesota, on May 9, 2019.

Calyxt, Inc.

By: /s/ James A. Blome

Name: James A. Blome
Title: Chief Executive Officer

POWER OF ATTORNEY

The undersigned directors and officers of Calyxt, Inc. hereby appoint each of James A. Blome, William F. Koschak and Debra H. Frimerman as attorneys-in-fact for the undersigned, with full power of substitution for, and in the name, place and stead of the undersigned, to sign and file with the Securities and Exchange Commission under the Securities Act of 1933, any and all amendments (including post-effective amendments) and exhibits to this registration statement on Form S-8 and any and all applications and other documents to be filed with the Securities and Exchange Commission pertaining to the registration of the securities covered hereby, with full power and authority to do and perform any and all acts and things whatsoever requisite and necessary or desirable, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on May 9, 2019.

Signature	Title	Date	
/s/ James A. Blome James A. Blome	Chief Executive Officer (Principal Executive Officer)	May 9, 2019	
/s/ William F. Koschak William F. Koschak	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	May 9, 2019	
/s/ André Choulika André Choulika	Chairman & Director	May 9, 2019	
/s/ Laurent Arthaud Laurent Arthaud	Director	May 9, 2019	
/s/ Phillippe Dumont Phillippe Dumont	Director	May 9, 2019	
/s/ Jonathan Fassberg Jonathan Fassberg	Director	May 9, 2019	
/s/ Alain Godard Alain Godard	Director	May 9, 2019	
/s/ Anna Ewa Kozicz-Stankiewicz Anna Ewa Kozicz-Stankiewicz	Director	May 9, 2019	
/s/ Kimberly Nelson Kimberly Nelson	Director	May 9, 2019	
/s/ Christopher J. Neugent Christopher J. Neugent	Director	May 9, 2019	
/s/ Yves Joseph Ribeill Yves Joseph Ribeill	Director	May 9, 2019	

JONES DAY

250 VESEY STREET • NEW YORK, NEW YORK 10281-1047 TELEPHONE: +1.212.326.3939 • FACSIMILE: +1.212.755.7306

May 9, 2019

Calyxt, Inc. 2800 Mount Ridge Road Roseville, MN 55113

Re: Registration Statement on Form S-8 Filed by Calyxt, Inc.

Ladies and Gentlemen:

We have acted as counsel for Calyxt, Inc., a Delaware corporation (the "*Company*"), in connection with the Calyxt, Inc. 2017 Omnibus Incentive Plan (the "*Plan*"). In connection with the opinion expressed herein, we have examined such documents, records and matters of law as we have deemed relevant or necessary for purposes of such opinion. Based on the foregoing and subject to the further limitations, qualifications and assumptions set forth herein, we are of the opinion that the aggregate of 2,832,445 shares (the "*Shares*") of common stock, par value \$0.0001 per share, of the Company that may be issued or delivered and sold pursuant to the Plan and the authorized forms of stock option, restricted stock unit or other applicable award agreements thereunder (the "*Award Agreements*") will be, when issued or delivered and sold in accordance with the Plan and the Award Agreements, validly issued, fully paid and nonassessable, provided that the consideration for the Shares is at least equal to the stated par value thereof.

The opinion expressed herein is limited to the General Corporation Law of the State of Delaware, as currently in effect, and we express no opinion as to the effect of the laws of any other jurisdiction on the opinion expressed herein. In addition, we have assumed that the resolutions authorizing the Company to issue or deliver and sell the Shares pursuant to the Plan and the Award Agreements will be in full force and effect at all times at which the Shares are issued or delivered and sold by the Company, and that the Company will take no action inconsistent with such resolutions. In rendering the opinion above, we have assumed that each award under the Plan will be approved by the Board of Directors of the Company or an authorized committee of the Board of Directors.

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Calyxt, Inc. May 9, 2019 Page 2

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement on Form S-8 filed by the Company to effect the registration of the Shares under the Securities Act of 1933 (the "Act"). In giving such consent, we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

/s/ Jones Day

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2017 Omnibus Incentive Plan of Calyxt, Inc. of our report dated March 11, 2019, with respect to the financial statements of Calyxt, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2018, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Minneapolis, Minnesota May 9, 2019