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 of Principal Executive Offices, Including Zip Code)

CALYXT, INC. 2017 OMNIBUS INCENTIVE PLAN (Full title of the plan)

> Debra Frimerman General Counsel and Corporate Secretary 2800 Mount Ridge Road Roseville, MN 55113 (Name and address of agent for service)

(651) 683-2807 (Telephone number, including area code, of agent for service)

Copies to:

Peter E. Devlin Erik B. Lundgren 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 □ Non-accelerated filer ⊠

Accelerated filer

Smaller reporting company \Box

Emerging growth company \Box

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.

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 650,446 shares of common stock, par value \$0.0001 per share, of Calyxt, Inc. (the "Company" or the "Registrant") authorized for issuance pursuant to the Calxyt, Inc. 2017 Omnibus Incentive Plan, as amended, which is the same class as the securities previously registered for issuance thereunder on effective Registration Statements on Form S-8 filed with the Securities and Exchange Commission on July 20, 2017 (File No. 333-219382), May 9, 2019 (File No. 333-231336) and July 16, 2021 (File No. 333-257972) (collectively, the "Prior Registration Statements"). The contents of the Prior Registration Statements 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) the Company's Annual Report on Form 10-K for the year ended December 31, 2022 (including the information in Part III incorporated therein by reference from the Company's Definitive Proxy Statement on Schedule 14A for the year ended December 31, 2022);
- (b) the Company's Current Reports on Form 8-K filed on January 17, 2023; and
- (c) the description of the Company's common stock filed as <u>Exhibit 4.1</u> to the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

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 herein, or 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 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
4.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Company's Annual Report on Form 10-K filed with the SEC on March 14, 2018).
4.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 of the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2018).
5.1*	Opinion of Jones Day.
23.1*	Consent of Ernst & Young LLP.
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, as amended (incorporated by reference to Annex A of the Company's Definitive Proxy Statement filed with the SEC on April 6, 2021.
99.2	<u>Calyxt, Inc. 2017 Stock Option Sub—Plan for French Employees and Directors (incorporated 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	Form of Stock Option Agreement pursuant to the Calyxt, Inc. 2017 Omnibus Incentive Plan, as amended (incorporated by reference to Exhibit 10.3 of the Company's Form 10-Q for the quarter ended June 30, 2020).
99.4	Form of Restrictive Stock Unit Agreement pursuant to the Calyxt, Inc. 2017 Omnibus Incentive Plan, as amended (incorporated by reference to Exhibit 10.2 of the Company's Form 10-Q for the quarter ended June 30, 2020).
99.5	Form of Performance Stock Unit Award Agreement (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019).
99.6	Calyxt, Inc. 2017 Restricted Stock Unit Sub-Plan for French Employees and Directors (incorporated 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)).
99.7	Form of Performance Stock Unit Agreement pursuant to the Calyxt, Inc. 2017 Omnibus Incentive Plan, as amended (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the SEC on March 28, 2022)
99.8	Form of Restrictive Stock Unit Agreement pursuant to the Calyxt, Inc. 2017 Omnibus Incentive Plan, as amended (incorporated by

reference to Exhibit 10.44 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022)

107* <u>Filing Fee Table</u>

* Filed herewith.

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 March 2, 2023.

Calyxt, Inc.

By:	/s/ Michael A. Carr
Name:	Michael A. Carr

Title: Chief Executive Officer

POWER OF ATTORNEY

The undersigned directors and officers of Calyxt, Inc. hereby appoint each of 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 March 2, 2023.

Signature	Title	Date
/s/ Michael A. Carr	President, Chief Executive Officer and Director	March 2, 2023
Michael A. Carr	(Principal Executive Officer)	
/s/ William F. Koschak	Chief Financial Officer	March 2, 2023
William F. Koschak	(Principal Financial Officer and Principal Accounting Officer)	
/s/ Yves J. Ribeill, Ph.D.	Board Chair and Director	March 2, 2023
Yves J. Ribeill, Ph.D.		
/s/ Laurent Arthaud	Director	March 2, 2023
Laurent Arthaud		
/s/ Philippe Dumont	Director	March 2, 2023
Phillipe Dumont		
/s/ Jonathan Fassberg	Director	March 2, 2023
Jonathan Fassberg		
/s/ Anna Ewa Kozicz-Stankiewicz	Director	March 2, 2023
Anna Ewa Kozicz-Stankiewicz		
/s/ Kimberly Nelson	Director	March 2, 2023
Kimberly Nelson		
/s/ Christopher Neugent	Director	March 2, 2023
Christopher Neugent		

JONES DAY

250 VESEY STREET • NEW YORK, NEW YORK 10281.1047 TELEPHONE: +1.212.326.3939 • FACSIMILE: +1.212.755.7306

March 2, 2023

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 registration of 650,446 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 Calyxt, Inc. 2017 Omnibus Incentive Plan (as amended, effective May 18, 2021, 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 Shares 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, performance stock unit, or other applicable award will be, when issued or delivered and sold in accordance with the Plan, 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 will be in full force and effect at all times at which the Shares are issued or delivered or sold by the Company, and that the Company will take no action inconsistent with such resolutions.

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

AMSTERDAM • ATLANTA • BEIJING • BOSTON • BRIBBANE • BRUBBELS • CHICAGO • CLEVELAND • COLUMBUS • DALLAS • DETROIT DUBAI • DÜSSELDORF • FRANKFURT • HONG KONG • HOUSTON • IRVINE • LONDON • LOS ANGELES • MADRID • MELBOURNE MEXICO CITY • MIAMI • MILAN • MINNEAPOLIS • MOSCOW • MUNICH • NEW YORK • PARIS • PERTH • PITTEBURGH • SAN DIEGO SAN FRANCISCO • SÃO PAULO • SAUDI ARABIA • SHANGHAI • SILICON VALLEY • SINGAPORE • SYDNEY • TAIPEI • TOKYO • WASHINGTON

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Calyxt, Inc. 2017 Omnibus Incentive Plan of our report dated March 2, 2023, with respect to the consolidated financial statements of Calyxt, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Minneapolis, Minnesota March 2, 2022

Calculation of Filing Fee Table

Form S-8 (Form Type)

Calyxt, Inc.

(Exact name of registrant as specified in its charter)

Table 1 - Newly Registered Securities

Security	Security Class Title	Fee Calculation	Amount	Proposed	Maximum	Fee Rate	Amount of
Туре		Rule	Registered	Maximum	Aggregate		Registration Fee
			(1)	Offering	Offering Price		
				Price Per			
				Unit			
Equity	Common Stock, par	Rule 457(c) and	650,446 (2)	\$0.40 (3)	\$260,178.40	\$110.20 per \$1,000,000	\$28.67
	value \$0.0001 share	Rule 457(h)					
Total Offering Amounts							\$28.67
Total Fee Offsets							—
Net Fee Due							\$28.67

(1) Pursuant to Rule 416 under the Securities Act of 1933 (the "*Securities Act*"), this Registration Statement shall also include any additional shares of common stock, par value \$0.0001 per share (the "*Common Stock*"), of Calyxt, Inc. that may become issuable by reason of stock dividends, stock splits, recapitalization or similar transactions.

(2) Represents additional shares of Common Stock available pursuant to automatic increases to the number of shares available for issuance under the Calyxt, Inc. 2017 Omnibus Incentive Plan, as amended (the "*Omnibus Plan*") under the evergreen provision of the Omnibus Plan. Shares available for issuance under the Omnibus Plan have been previously registered on Registration Statements on Form S-8 filed with the Securities and Exchange Commission on July 20, 2017 (File No. 333-219382), May 9, 2019 (File No. 333-231336) and July 16, 2021 (File No. 333-257972).

(3) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and (h) under the Securities Act, based on the average of the high and low prices of the Common Stock as reported by the Nasdaq Stock Market LLC on February 27, 2023.