UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)
☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended **June 30, 2023**

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______ to _______

Commission File Number: **000-21467**

ALTO INGREDIENTS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**41-2170618**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1300 South Second Street, Pekin, Illinois	**61554**
(Address of principal executive offices)	(zip code)

(916) 403-2123
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each Class	Trading Symbol	Name of Exchange on Which Registered
Common Stock, $0.001 par value	ALTO	The Nasdaq Stock Market LLC (Nasdaq Capital Market)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 ☒
Non-accelerated filer ☐
Smaller reporting company ☐
Emerging growth company ☐

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 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of August 7, 2023, there were 75,911,374 shares of Alto Ingredients, Inc. common stock, $0.001 par value per share, and 896 shares of Alto Ingredients, Inc. non-voting common stock, $0.001 par value per share, outstanding.

PART I
FINANCIAL INFORMATION

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

ALTO INGREDIENTS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands)

	June 30, 2023 (unaudited)	December 31, 2022 *
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 22,739	$ 36,456
Restricted cash	2,351	13,069
Accounts receivable, net (net of allowance for credit losses of $59 and $105, respectively)	63,367	68,655
Inventories	71,115	66,628
Derivative instruments	14,038	4,973
Other current assets	5,919	9,340
Total current assets	179,529	199,121
Property and equipment, net	246,693	239,069
Other Assets:		
Right of use operating lease assets, net	24,433	18,937
Intangible assets, net	8,792	9,087
Goodwill	5,970	5,970
Other assets	5,993	6,137
Total other assets	45,188	40,131
Total Assets	$ 471,410	$ 478,321

* Amounts derived from the audited consolidated financial statements for the year ended December 31, 2022.

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(in thousands, except par value)

	June 30, 2023 (unaudited)	December 31, 2022 *
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 25,933	$ 28,115
Accrued liabilities	15,328	26,556
Current portion – operating leases	3,914	3,849
Derivative instruments	8,396	6,732
Other current liabilities	5,115	12,765
Total current liabilities	58,686	78,017
Long-term debt, net	82,082	68,356
Operating leases, net of current portion	21,058	15,062
Other liabilities	8,791	8,797
Total Liabilities	170,617	170,232
Commitments and Contingencies (Note 6)		
Stockholders' Equity:		
Preferred stock, $0.001 par value; 10,000 shares authorized; Series A: 1,684 shares authorized; no shares issued and outstanding as of June 30, 2023 and December 31, 2022; Series B: 1,581 shares authorized; 927 shares issued and outstanding as of June 30, 2023 and December 31, 2022; liquidation preference of $18,075 as of June 30, 2023	1	1
Common stock, $0.001 par value; 300,000 shares authorized; 75,923 and 75,154 shares issued and outstanding as of June 30, 2023 and December 31, 2022, respectively	76	75
Non-voting common stock, $0.001 par value; 3,553 shares authorized; 1 share issued and outstanding as of June 30, 2023 and December 31, 2022, respectively	—	—
Additional paid-in capital	1,039,735	1,040,834
Accumulated other comprehensive income	1,822	1,822
Accumulated deficit	(740,841)	(734,643)
Total Stockholders' Equity	300,793	308,089
Total Liabilities and Stockholders' Equity	$ 471,410	$ 478,321

* Amounts derived from the audited consolidated financial statements for the year ended December 31, 2022.

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited, in thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Net sales	$ 317,297	$ 362,189	$ 631,188	$ 670,307
Cost of goods sold	300,116	353,345	617,171	656,690
Gross profit	17,181	8,844	14,017	13,617
Selling, general and administrative expenses	7,911	8,996	15,793	16,625
Asset impairments	—	—	574	—
Income (loss) from operations	9,270	(152)	(2,350)	(3,008)
Interest expense, net	(1,734)	(319)	(3,299)	(519)
Income from cash grant	—	22,652	—	22,652
Other income (expense), net	59	(66)	78	388
Income (loss) before provision for income taxes	7,595	22,115	(5,571)	19,513
Provision for income taxes	—	—	—	—
Net income (loss)	$ 7,595	$ 22,115	$ (5,571)	$ 19,513
Preferred stock dividends	$ (315)	$ (315)	$ (627)	$ (627)
Income allocated to participating securities	(96)	(284)	—	(251)
Net income (loss) available to common stockholders	$ 7,184	$ 21,516	$ (6,198)	$ 18,635
Net income (loss) per share, basic	$ 0.10	$ 0.29	$ (0.08)	$ 0.26
Net income (loss) per share, diluted	$ 0.10	$ 0.29	$ (0.08)	$ 0.26
Weighted-average shares outstanding, basic	73,394	72,936	73,603	71,690
Weighted-average shares outstanding, diluted	74,103	73,123	73,603	71,958

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited, in thousands)

	Six Months Ended June 30, 2023	Six Months Ended June 30, 2022
Operating Activities:		
Net income (loss)	$ (5,571)	$ 19,513
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:		
Depreciation and amortization of intangibles	11,735	12,862
Gains on derivative instruments	(5,174)	(21,936)
Inventory valuation	—	3,010
Asset impairments	574	—
Non-cash compensation	1,711	1,779
Amortization of deferred financing fees	494	37
Amortization of debt discount	397	—
Bad debt (recovery) expense	(46)	66
Changes in operating assets and liabilities, net of business acquisition:		
Accounts receivable	5,334	(393)
Inventories	(4,487)	(14,729)
Other assets	3,565	3,210
Operating leases	(2,566)	(2,528)
Accounts payable and accrued expenses	(18,870)	19,804
Net cash (used in) provided by operating activities	(12,904)	20,695
Investing Activities:		
Additions to property and equipment	(17,968)	(9,762)
Proceeds from principal payments on notes receivable	—	14,766
Deferred purchase price payments for Eagle Alcohol	(3,500)	—
Purchase of Eagle Alcohol, net of cash acquired	—	(14,655)
Net cash used in investing activities	(21,468)	(9,651)
Financing Activities:		
Net proceeds from Kinergy's line of credit	13,247	2,195
Stock repurchases	(2,683)	—
Preferred stock dividends paid	(627)	(627)
Net cash provided by financing activities	9,937	1,568
Net change in cash, cash equivalents and restricted cash	(24,435)	12,612
Cash, cash equivalents and restricted cash at beginning of period	49,525	62,125
Cash, cash equivalents and restricted cash at end of period	$ 25,090	$ 74,737
Reconciliation of total cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 22,739	$ 57,376
Restricted cash	2,351	17,361
Total cash, cash equivalents and restricted cash	$ 25,090	$ 74,737
Supplemental Information:		
Interest paid	$ 3,964	$ 456
Capitalized interest	$ 1,615	$ 87

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(unaudited, in thousands)

	Preferred Stock		Common Stock		Additional Paid-In	Accumulated	Accum. Other Comprehensive	
	Shares	Amount	Shares	Amount	Capital	Deficit	Income	Total
Balances, January 1, 2023	927	$ 1	75,154	$ 75	$ 1,040,834	$ (734,643)	$ 1,822	$ 308,089
Stock-based compensation	—	—	—	—	752	—	—	752
Restricted stock issued to employees and directors, net of cancellations and tax	—	—	1,893	2	(8)	—	—	(6)
Stock repurchases	—	—	(860)	(1)	(1,681)	—	—	(1,682)
Preferred stock dividends	—	—	—	—	—	(312)	—	(312)
Net loss	—	—	—	—	—	(13,166)	—	(13,166)
Balances, March 31, 2023	927	$ 1	76,187	$ 76	$ 1,039,897	$ (748,121)	$ 1,822	$ 293,675
Stock-based compensation	—	—	—	—	959	—	—	959
Restricted stock issued to employees and directors, net of cancellations and tax	—	—	125	—	(120)	—	—	(120)
Stock repurchases	—	—	(389)	—	(1,001)	—	—	(1,001)
Preferred stock dividends	—	—	—	—	—	(315)	—	(315)
Net income	—	—	—	—	—	7,595	—	7,595
Balances, June 30, 2023	927	$ 1	75,923	$ 76	$ 1,039,735	$ (740,841)	$ 1,822	$ 300,793
Balances, January 1, 2022	927	$ 1	72,778	$ 73	$ 1,037,205	$ (691,781)	$ (284)	$ 345,214
Stock-based compensation	—	—	—	—	673	—	—	673
Restricted stock issued to employees and directors, net of cancellations and tax	—	—	684	—	(9)	—	—	(9)
Shares issued for Eagle Alcohol acquisition	—	—	949	1	—	—	—	1
Preferred stock dividends	—	—	—	—	—	(312)	—	(312)
Net loss	—	—	—	—	—	(2,602)	—	(2,602)
Balances, March 31, 2022	927	$ 1	74,411	$ 74	$ 1,037,869	$ (694,695)	$ (284)	$ 342,965
Stock-based compensation	—	—	—	—	1,106	—	—	1,106
Restricted stock issued to employees and directors, net of cancellations and tax	—	—	(223)	—	(2,283)	—	—	(2,283)
Preferred stock dividends	—	—	—	—	—	(315)	—	(315)
Net income	—	—	—	—	—	22,115	—	22,115
Balances, June 30, 2022	927	$ 1	74,188	$ 74	$ 1,036,692	$ (672,895)	$ (284)	$ 363,588

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. ORGANIZATION AND BASIS OF PRESENTATION.

Organization and Business – The consolidated financial statements include, for all periods presented, the accounts of Alto Ingredients, Inc., a Delaware corporation, and its direct and indirect wholly-owned subsidiaries (collectively, the "Company"), including Kinergy Marketing LLC, an Oregon limited liability company ("Kinergy"), Alto Nutrients, LLC, a California limited liability company, Eagle Alcohol Company, LLC, a Delaware limited liability company, Alto Op Co., a Delaware corporation, Alto Pekin, LLC, a Delaware limited liability company, and Alto ICP, LLC, a Delaware limited liability company, and the Company's production facilities in Oregon and Idaho.

The Company is a leading producer and distributor of specialty alcohols and essential ingredients. The Company also produces and markets fuel-grade ethanol. The Company's production facilities in Pekin, Illinois are located in the heart of the Corn Belt. The Company's two production facilities in Oregon and Idaho are located in close proximity to both feed and fuel-grade ethanol customers.

The Company has a combined alcohol production capacity of 350 million gallons per year and produced in 2022 over 1.6 million tons of essential ingredients, such as dried yeast, corn protein meal, corn protein feed, corn germ, and distillers grains and liquid feed used in commercial animal feed and pet foods. In addition, the Company markets and distributes fuel-grade ethanol produced by third parties.

The Company focuses on four key markets: *Health, Home & Beauty*; *Food & Beverage*; *Essential Ingredients*; and *Renewable Fuels*. Products for the Health, Home & Beauty market include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for the Food & Beverage markets include grain neutral spirits used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for Essential Ingredients markets include dried yeast, corn protein meal, corn protein feed, corn germ, and distillers grains and liquid feed used in commercial animal feed and pet foods. Products for the Renewable Fuels markets include fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel and biodiesel fuels.

As of June 30, 2023, all of the Company's production facilities were operating, however, from January 2023 to April 2023, its Magic Valley plant in Idaho was temporarily hot-idled due to extreme natural gas prices, other unfavorable market conditions and to facilitate the installation of its new high protein systems at the plant. The Company restarted the facility in April 2023. As market conditions change, the Company may increase, decrease or idle production at one or more operating facilities or resume operations at any idled facility.

Basis of Presentation–Interim Financial Statements – The accompanying unaudited consolidated financial statements and related notes have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Results for interim periods should not be considered indicative of results for a full year. These interim consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2022. The accounting policies used in preparing these consolidated financial statements are the same as those described in Note 1 to the consolidated financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2022. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair statement of the results for interim periods have been included. All significant intercompany accounts and transactions have been eliminated in consolidation.

Accounts Receivable and Allowance for Credit Losses – Trade accounts receivable are presented at original invoice amount, net of the allowance for credit losses. The Company sells specialty alcohols to large consumer product companies, sells fuel-grade ethanol to gasoline refining and distribution companies, sells essential ingredients to animal feed customers, including distillers grains and other feed products to dairy operators and animal feedlots and corn oil to poultry and biodiesel customers, in each case generally without requiring collateral.

The carrying amount of accounts receivable is reduced by a valuation allowance that reflects the Company's best estimate of the amounts that will not be collected. The Company regularly reviews accounts receivable and based on assessments of current customer creditworthiness, estimates the portion, if any, of the customer balance that will not be collected.

Of the accounts receivable balance, approximately $52,732,000 and $55,667,000 at June 30, 2023 and December 31, 2022, respectively, were used as collateral under Kinergy's operating line of credit. The allowance for credit losses was $59,000 and $105,000 as of June 30, 2023 and December 31, 2022, respectively. The Company recorded a bad debt recovery of $7,000 and bad debt expense of $35,000 for the three months ended June 30, 2023 and 2022, respectively. The Company recorded a bad debt recovery of $46,000 and bad debt expense $66,000 for the six months ended June 30, 2023 and 2022, respectively. The Company does not have any off-balance sheet credit exposure related to its customers.

Share Repurchase Program – On September 12, 2022, the Company announced a share repurchase program under which it may repurchase up to $50 million of its common stock with an initial purchase authorization of $10 million. The Company's lender has further limited the Company's purchase authorization to $5 million. Amounts in excess of the purchase authorization of $5 million will require additional lender consent and amounts in excess of the initial purchase authorization of $10 million will require additional board and preferred stockholder authorization. The share repurchase program does not have an expiration date, does not require the repurchase of any particular amount of shares, and may be implemented, modified, suspended or discontinued in whole or in part at any time and without further notice. As repurchases are made, the Company will retire the shares, resulting in a reduction of issued and outstanding shares. For the three and six months ended June 30, 2023, the Company repurchased an aggregate of 389,000 shares and 1,249,000 shares for $1,001,000 and $2,683,000 in cash, respectively. As of June 30, 2023, total repurchases under the program since its inception equaled 1,600,000 shares for $4,008,000 in cash.

Financial Instruments – The carrying values of cash and cash equivalents, restricted cash, accounts receivable, derivative assets, accounts payable, accrued liabilities and derivative liabilities are reasonable estimates of their fair values because of the short maturity of these items. The Company believes the carrying value of its long-term debt instruments are not considered materially different than fair value because they were just recently issued.

Income from Cash Grant – In 2022, the Company applied for and received $22,652,000 in cash from the USDA's Biofuel Producer Program. The program was created as part of the CARES Act in 2020, which allocated $700,000,000 to support biofuel producers who experienced market losses due to the pandemic. The cash grant is not required to be repaid. Since these funds are provided to subsidize historical losses of the Company, and are not required to be repaid, the Company accounted for the proceeds by analogy to International Accounting Standards 20 *Accounting for Government Grants and Disclosure of Government Assistance*, and reported the amount as income from cash grant in the accompanying consolidated statements of operations.

Estimates and Assumptions – The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates are required as part of determining the allowance for credit losses, net realizable value of inventory, long-lived asset impairments, valuation allowances on deferred income taxes, the potential outcome of future tax consequences of events recognized in the Company's financial statements or tax returns, and the valuation of assets acquired and liabilities assumed as a result of business combinations. Actual results and outcomes may materially differ from management's estimates and assumptions.

2. SEGMENTS.

The Company reports its financial and operating performance in three segments: (1) marketing and distribution, which includes marketing and merchant trading for Company-produced alcohols and essential ingredients on an aggregated basis, and sales of fuel-grade ethanol sourced from third parties (2) Pekin production, which includes the production and sale of alcohols and essential ingredients produced at the Company's Pekin, Illinois campus ("Pekin Campus"), and (3) Other production, which includes the production and sale of fuel-grade ethanol and essential ingredients produced at all of the Company's other production facilities on an aggregated basis ("Other production"), none of which are individually so significant as to be considered a separately reportable segment.

The following tables set forth certain financial data for the Company's operating segments (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Net Sales				
Pekin Campus, recorded as gross:				
Alcohol sales	$ 127,694	$ 143,768	$ 260,075	$ 259,818
Essential ingredient sales	53,954	59,853	117,585	115,133
Intersegment sales	444	269	757	525
Total Pekin Campus sales	182,092	203,890	378,417	375,476
Marketing and distribution:				
Alcohol sales, gross	$ 72,589	$ 63,558	$ 156,936	$ 117,484
Alcohol sales, net	104	317	218	668
Intersegment sales	2,499	3,242	5,342	6,239
Total marketing and distribution sales	75,192	67,117	162,496	124,391
Other production, recorded as gross:				
Alcohol sales	$ 44,384	$ 67,184	$ 65,316	$ 126,991
Essential ingredient sales	14,421	23,372	22,773	42,309
Intersegment sales	62	—	62	12
Total Other production sales	58,867	90,556	88,151	169,312
Corporate and other	4,151	4,137	8,285	7,904
Intersegment eliminations	(3,005)	(3,511)	(6,161)	(6,776)
Net sales as reported	$ 317,297	$ 362,189	$ 631,188	$ 670,307
Cost of goods sold:				
Pekin Campus	$ 168,419	$ 195,691	$ 366,596	$ 364,573
Marketing and distribution	71,746	63,796	154,871	118,510
Other production	57,834	91,606	91,815	169,851
Corporate and other	3,414	3,197	5,786	6,070
Intersegment eliminations	(1,297)	(945)	(1,897)	(2,314)
Cost of goods sold as reported	$ 300,116	$ 353,345	$ 617,171	$ 656,690
Gross profit:				
Pekin Campus	$ 13,673	$ 8,199	$ 11,821	$ 10,903
Marketing and distribution	3,446	3,321	7,625	5,881
Other production	1,033	(1,050)	(3,664)	(539)
Corporate and other	737	940	2,499	1,834
Intersegment eliminations	(1,708)	(2,566)	(4,264)	(4,462)
Gross profit as reported	$ 17,181	$ 8,844	$ 14,017	$ 13,617
Income (loss) before provision for income taxes:				
Pekin Campus	$ 10,790	$ 16,331	$ 5,672	$ 16,413
Marketing and distribution	1,607	1,036	3,618	1,824
Other production	(783)	7,570	(6,484)	6,361
Corporate and other	(4,019)	(2,822)	(8,377)	(5,085)
	$ 7,595	$ 22,115	$ (5,571)	$ 19,513
Depreciation and amortization of intangibles:				
Pekin Campus	$ 4,998	$ 5,084	$ 9,816	$ 9,621
Other production	455	1,458	1,464	2,822
Corporate and other	228	186	455	419
	$ 5,681	$ 6,728	$ 11,735	$ 12,862
Interest expense, net of capitalized interest:				
Pekin Campus	$ (151)	$ (3)	$ (635)	$ (33)
Marketing and distribution	109	336	604	573
Other production	(151)	(39)	(508)	(54)
Corporate and other	1,927	25	3,838	33
	$ 1,734	$ 319	$ 3,299	$ 519

The following table sets forth the Company's total assets by operating segment (in thousands):

	June 30, 2023	December 31, 2022
Total assets:		
Pekin Campus	$ 253,220	$ 257,089
Marketing and distribution	122,368	114,755
Other production	54,326	51,886
Corporate and other	41,496	54,591
	$ 471,410	$ 478,321

3. INVENTORIES.

Inventories consisted primarily of bulk ethanol, specialty alcohols, corn, essential ingredients and unleaded fuel, and are valued at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. Inventory is net of a valuation adjustment of $0 and $4,612,000 as of June 30, 2023 and December 31, 2022, respectively. Inventory balances consisted of the following (in thousands):

	June 30, 2023	December 31, 2022
Finished goods	$ 45,089	$ 47,736
Work in progress	7,185	6,396
Raw materials	17,415	11,197
Other	1,426	1,299
Total	$ 71,115	$ 66,628

4. DERIVATIVES.

The business and activities of the Company expose it to a variety of market risks, including risks related to changes in commodity prices. The Company monitors and manages these financial exposures as an integral part of its risk management program. This program recognizes the unpredictability of financial markets and seeks to reduce the potentially adverse effects that market volatility could have on operating results.

Commodity Risk – Cash Flow Hedges – The Company uses derivative instruments to protect cash flows from fluctuations caused by volatility in commodity prices for periods of up to twelve months to protect gross profit margins from potentially adverse effects of market and price volatility on alcohol sales and purchase commitments where the prices are set at a future date and/or if the contracts specify a floating or index-based price. In addition, the Company hedges anticipated sales of alcohol to minimize its exposure to the potentially adverse effects of price volatility. These derivatives may be designated and documented as cash flow hedges and effectiveness is evaluated by assessing the probability of the anticipated transactions and regressing commodity futures prices against the Company's purchase and sales prices. Ineffectiveness, which is defined as the degree to which the derivative does not offset the underlying exposure, is recognized immediately in cost of goods sold. For the three and six months ended June 30, 2023 and 2022, the Company did not designate any of its derivatives as cash flow hedges.

Commodity Risk – Non-Designated Hedges – The Company uses derivative instruments to lock in prices for certain amounts of corn and alcohols by entering into exchange-traded futures contracts or options for those commodities. These derivatives are not designated for hedge accounting treatment. The changes in fair value of these contracts are recorded on the balance sheet and recognized immediately in cost of goods sold. The Company recognized net gains of $6,951,000 and $16,619,000 as the change in the fair value of these contracts for the three months ended June 30, 2023 and 2022, respectively. The Company recognized net gains of $5,174,000 and $21,936,000 as the change in the fair value of these contracts for the six months ended June 30, 2023 and 2022, respectively.

Non Designated Derivative Instruments – The classification and amounts of the Company's derivatives not designated as hedging instruments, and related cash collateral balances, are as follows (in thousands):

	As of June 30, 2023			
	Assets		Liabilities	
Type of Instrument	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Cash collateral balance	Restricted cash	$ 2,351		
Commodity contracts	Derivative instruments	$ 14,038	Derivative instruments	$ 8,396

	As of December 31, 2022			
	Assets		Liabilities	
Type of Instrument	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Cash collateral balance	Restricted cash	$ 13,069		
Commodity contracts	Derivative instruments	$ 4,973	Derivative instruments	$ 6,732

The above amounts represent the gross balances of the contracts; however, the Company does have a right of offset with each of its derivative brokers, but the Company's intent is to close out positions individually, therefore, the positions are reported at gross.

The classification and amounts of the Company's recognized gains for its derivatives not designated as hedging instruments are as follows (in thousands):

		Realized Gains	
		For the Three Months Ended June 30,	
Type of Instrument	Statements of Operations Location	2023	2022
Commodity contracts	Cost of goods sold	$ 5,477	$ 13,913
		$ 5,477	$ 13,913

		Realized (Losses) Gains	
		For the Six Months Ended June 30,	
Type of Instrument	Statements of Operations Location	2023	2022
Commodity contracts	Cost of goods sold	$ (2,226)	$ 29,476
		$ (2,226)	$ 29,476

		Unrealized Gains	
		For the Three Months Ended June 30,	
Type of Instrument	Statements of Operations Location	2023	2022
Commodity contracts	Cost of goods sold	$ 1,474	$ 2,706
		$ 1,474	$ 2,706

		Unrealized Gains (Losses)	
		For the Six Months Ended June 30,	
Type of Instrument	Statements of Operations Location	2023	2022
Commodity contracts	Cost of goods sold	$ 7,400	$ (7,540)
		$ 7,400	$ (7,540)

5. DEBT.

Long-term borrowings are summarized as follows (in thousands):

	June 30, 2023	December 31, 2022
Kinergy line of credit	$ 31,323	$ 18,076
Orion term loan	60,000	60,000
	91,323	78,076
Less unamortized debt discount	(4,297)	(4,686)
Less unamortized debt financing costs	(4,944)	(5,034)
Less current portion	—	—
Long-term debt	$ 82,082	$ 68,356

Excess Availability – As of June 30, 2023, the Company had $49.4 million in unused borrowing availability under the Kinergy line of credit and $40.0 million available under the Orion term loan. The Company also has an option to expand the Orion term loan by up to $25.0 million upon the satisfaction of certain conditions.

6. COMMITMENTS AND CONTINGENCIES.

Sales Commitments – At June 30, 2023, the Company had entered into sales contracts with its major customers to sell certain quantities of alcohol and essential ingredients. The Company had open alcohol indexed-price contracts for 78,432,000 gallons as of June 30, 2023 and open fixed-price alcohol sales contracts totaling $73,909,000 as of June 30, 2023. The Company had open fixed-price sales contracts for essential ingredients totaling $12,075,000 and open indexed-price sales contracts of essential ingredients for 113,000 tons as of June 30, 2023. These sales contracts are scheduled to be completed throughout 2023.

Purchase Commitments – At June 30, 2023, the Company had indexed-price purchase contracts to purchase 18,593,000 gallons of alcohol and fixed-price purchase contracts to purchase $2,461,000 of alcohol from its suppliers. The Company had fixed-price purchase contracts to purchase $43,984,000 of corn from its suppliers as of June 30, 2023. The Company had indexed-price purchase contracts for natural gas totaling 448,500 MMBTU as of June 30, 2023. The Company also had future commitments for certain capital projects totaling $17,419,000. These purchase commitments are scheduled to be satisfied throughout 2023 and 2024.

Litigation – General – The Company is subject to various claims and contingencies in the ordinary course of its business, including those related to litigation, business transactions, employee-related matters, environmental regulations, and others. When the Company is aware of a claim or potential claim, it assesses the likelihood of any loss or exposure. If it is probable that a loss will result and the amount of the loss can be reasonably estimated, the Company will record a liability for the loss. If the loss is not probable or the amount of the loss cannot be reasonably estimated, the Company discloses the claim if the likelihood of a potential loss is reasonably possible and the amount involved could be material. While the Company can provide no assurances, the Company does not expect that any of its pending legal proceedings will have a material impact on the Company's financial condition or results of operations.

7. PENSION AND RETIREMENT BENEFIT PLANS.

The Company sponsors a defined benefit pension plan (the “Retirement Plan”) and a healthcare and life insurance plan (the “Postretirement Plan”).

The Retirement Plan is noncontributory, and covers only “grandfathered” unionized employees at the Company’s Pekin, Illinois facility who fulfill minimum age and service requirements. Benefits are based on a prescribed formula based upon the employee’s years of service. The Retirement Plan, which is part of a collective bargaining agreement, covers only union employees hired prior to November 1, 2010.

The Company uses a December 31 measurement date for its Retirement Plan. The Company’s funding policy is to make the minimum annual contribution required by applicable regulations. As of December 31, 2022, the Retirement Plan’s accumulated projected benefit obligation was $18.0 million, with a fair value of plan assets of $16.7 million. The underfunded amount of $1.3 million is recorded on the Company’s consolidated balance sheet in other liabilities.

For the three months ended June 30, 2023, the Retirement Plan’s net periodic expense was $39,000, comprised of $225,000 in interest cost and $62,000 in service cost, partially offset by $248,000 of expected return on plan assets. For the three months ended June 30, 2022, the Retirement Plan’s net periodic benefit was $8,000, comprised of $273,000 of expected return on plan assets, partially offset by $164,000 in interest cost and $101,000 in service cost. For the six months ended June 30, 2023, the Retirement Plan’s net periodic expense was $78,000, comprised of $450,000 in interest cost and $124,000 in service cost, partially offset by $496,000 of expected return on plan assets. For the six months ended June 30, 2022, the Retirement Plan’s net periodic benefit was $16,000, comprised of $546,000 of expected return on plan assets, partially offset by $328,000 in interest cost and $202,000 in service cost.

The Postretirement Plan provides postretirement medical benefits and life insurance to certain “grandfathered” unionized employees. Employees hired after December 31, 2000 are not eligible to participate in the Postretirement Plan. The Postretirement Plan is contributory, with contributions required at the same rate as active employees. Benefit eligibility under the plan declines at age 65 from a defined benefit to a defined dollar cap based upon years of service. As of December 31, 2022, the Postretirement Plan’s accumulated projected benefit obligation was $3.9 million and is recorded on the Company’s consolidated balance sheet in other liabilities. The Company’s funding policy is to make the minimum annual contribution required by applicable regulations.

For the three months ended June 30, 2023, the Postretirement Plan’s net periodic expense was $36,000, comprised of $46,000 of interest cost and $3,000 of service cost, partially offset by $13,000 in amortization of gains. For the three months ended June 30, 2022, the Postretirement Plan’s net periodic expense was $32,000, comprised of $6,000 of interest cost and $26,000 of service cost.

For the six months ended June 30, 2023, the Postretirement Plan’s net periodic expense was $72,000, comprised of $92,000 of interest cost and $6,000 of service cost, partially offset by $26,000 in amortization of gains. For the six months ended June 30, 2022, the Postretirement Plan’s net periodic expense was $64,000, comprised of $12,000 of interest cost and $52,000 of service cost.

8. FAIR VALUE MEASUREMENTS.

The fair value hierarchy prioritizes the inputs used in valuation techniques into three levels, as follows:

- Level 1 – Observable inputs – unadjusted quoted prices in active markets for identical assets and liabilities;
- Level 2 – Observable inputs other than quoted prices included in Level 1 that are observable for the asset or liability through corroboration with market data; and
- Level 3 – Unobservable inputs – includes amounts derived from valuation models where one or more significant inputs are unobservable. For fair value measurements using significant unobservable inputs, a description of the inputs and the information used to develop the inputs is required along with a reconciliation of Level 3 values from the prior reporting period.

Pooled separate accounts – Pooled separate accounts invest primarily in domestic and international stocks, commercial paper or single mutual funds. The net asset value is used as a practical expedient to determine fair value for these accounts. Each pooled separate account provides for redemptions by the Retirement Plan at reported net asset values per share, with little to no advance notice requirement, therefore these funds are classified within Level 2 of the valuation hierarchy.

Other Derivative Instruments – The Company's other derivative instruments consist of commodity positions. The fair values of the commodity positions are based on quoted prices on the commodity exchanges and are designated as Level 1 inputs.

The following table summarizes recurring and nonrecurring fair value measurements by level at June 30, 2023 (in thousands):

	Fair Value	Level 1	Level 2	Level 3
Assets:				
Derivative financial instruments	$ 14,038	$ 14,038	$ —	$ —
Liabilities:				
Derivative financial instruments	$ (8,396)	$ (8,396)	$ —	$ —

The following table summarizes recurring and nonrecurring fair value measurements by level at December 31, 2022 (in thousands):

	Fair Value	Level 1	Level 2	Level 3	Benefit Plan Percentage Allocation
Assets:					
Derivative financial instruments	$ 4,973	$ 4,973	$ —	$ —	
Defined benefit plan assets(1) (pooled separate accounts):					
Large U.S. Equity(2)	4,586	—	4,586	—	28%
Small/Mid U.S. Equity(3)	2,986	—	2,986	—	18%
International Equity(4)	2,406	—	2,406	—	14%
Fixed Income(5)	6,710	—	6,710	—	40%
	$ 21,661	$ 4,973	$ 16,688	$ —	
Liabilities:					
Derivative financial instruments	$ 6,732	$ 6,732	$ —	$ —	

(1) Included in other assets in the consolidated balance sheets.

(2) This category includes investments in funds comprised of equity securities of large U.S. companies. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

(3) This category includes investments in funds comprised of equity securities of small- and medium-sized U.S. companies. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

(4) This category includes investments in funds comprised of equity securities of foreign companies including emerging markets. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

(5) This category includes investments in funds comprised of U.S. and foreign investment-grade fixed income securities, high-yield fixed income securities that are rated below investment-grade, U.S. treasury securities, mortgage-backed securities, and other asset-backed securities. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

9. EARNINGS PER SHARE.

The following tables compute basic and diluted earnings per share (in thousands, except per share data):

	Three Months Ended June 30, 2023		
	Income Numerator	Shares Denominator	Per-Share Amount
Net income	$ 7,595		
Less: Preferred stock dividends	(315)		
Less: Income allocated to participating securities	(96)		
Basic income per share:			
Income available to common stockholders	$ 7,184	73,394	$ 0.10
Add: Dilutive instruments	—	709	
Diluted income per share:			
Income available to common stockholders	$ 7,184	74,103	$ 0.10

	Three Months Ended June 30, 2022		
	Income Numerator	Shares Denominator	Per-Share Amount
Net income	$ 22,115		
Less: Preferred stock dividends	(315)		
Less: Income allocated to participating securities	(284)		
Basic income per share:			
Income available to common stockholders	$ 21,516	72,936	$ 0.29
Add: Dilutive instruments	—	187	
Diluted income per share:			
Income available to common stockholders	$ 21,516	73,123	$ 0.29

	Six Months Ended June 30, 2023		
	Loss Numerator	Shares Denominator	Per-Share Amount
Net loss	$ (5,571)		
Less: Preferred stock dividends	(627)		
Basic and diluted loss per share:			
Loss available to common stockholders	$ (6,198)	73,603	$ (0.08)

	Six Months Ended June 30, 2022		
	Income Numerator	Shares Denominator	Per-Share Amount
Net income	$ 19,513		
Less: Preferred stock dividends	(627)		
Less: Income allocated to participating securities	(251)		
Basic income per share:			
Income available to common stockholders	$ 18,635	71,690	$ 0.26
Add: Dilutive instruments	—	268	
Diluted income per share:			
Income available to common stockholders	$ 18,635	71,958	$ 0.26

There were an additional aggregate potentially dilutive weighted-average shares of 981,000 from convertible securities outstanding for the three and six months ended June 30, 2023. There were an additional aggregate potentially dilutive weighted-average shares of 964,000 from convertible securities outstanding for the three and six months ended June 30, 2022. These securities were not considered in calculating diluted net income (loss) per share for the three and six months ended June 30, 2023 and 2022, as their effect would have been anti-dilutive.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included elsewhere in this report. This report and our consolidated financial statements and notes to consolidated financial statements contain forward-looking statements, which generally include the plans and objectives of management for future operations, including plans and objectives relating to our future economic performance and our current beliefs regarding revenues we might generate and profits we might earn if we are successful in implementing our business and growth strategies. The forward-looking statements and associated risks may include, relate to or be qualified by other important factors, including:

- fluctuations in the market prices of alcohols and essential ingredients;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- our ability to fund, and the costs, timing and effects of our plant improvement and other capital projects;
- the projected growth or contraction in the alcohols and essential ingredients markets in which we operate;
- our strategies for expanding, maintaining or contracting our presence in these markets;
- anticipated trends in our financial condition and results of operations; and
- our ability to distinguish ourselves from our current and future competitors.

You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report, or in the case of a document incorporated by reference, as of the date of that document. We do not undertake to update, revise or correct any forward-looking statements, except as required by law.

Any of the factors described immediately above or referenced from time to time in our filings with the Securities and Exchange Commission or in the "Risk Factors" section below could cause our financial results, including our net income or loss or growth in net income or loss to differ materially from prior results, which in turn could, among other things, cause the price of our common stock to fluctuate substantially.

Overview

We are a leading producer and distributor of specialty alcohols and essential ingredients, and the largest producer of specialty alcohols in the United States.

We operate five alcohol production facilities. Three of our production facilities are located in Illinois, one is located in Oregon and another is located in Idaho. We have an annual alcohol production capacity of 350 million gallons, comprised of 210 million gallons of fuel-grade ethanol and up to 140 million gallons of specialty alcohols. We market and distribute all of the alcohols produced at our facilities as well as fuel-grade ethanol produced by third parties. In 2022, we marketed and distributed approximately 420 million gallons combined of our own alcohols as well as fuel-grade ethanol produced by third parties, and over 1.6 million tons of essential ingredients on a dry matter basis.

We report our financial and operating performance in three segments: (1) marketing and distribution, which includes marketing and merchant trading for company-produced alcohols and essential ingredients on an aggregated basis, and sales of fuel-grade ethanol sourced from third parties, (2) Pekin production, which includes the production and sale of alcohols and essential ingredients produced at our three production facilities located in Pekin, Illinois, which we refer to as our Pekin Campus, and (3) Other production, which includes the production and sale of renewable fuel and essential ingredients produced at all of our other production facilities on an aggregated basis, none of which are individually so significant as to be considered a separately reportable segment.

Our mission is to expand our business as a leading producer and distributor of specialty alcohols and essential ingredients. We intend to accomplish this goal in part by investing in our specialized and higher value specialty alcohol production and distribution infrastructure, expanding production in high-demand essential ingredients, expanding and extending the sale of our products into new regional and international markets, building efficiencies and economies of scale and by capturing a greater portion of the value stream.

Our wholly-owned subsidiary, Eagle Alcohol Company LLC, or Eagle Alcohol, specializes in break bulk distribution of specialty alcohols. Eagle Alcohol purchases bulk alcohol from suppliers and then stores, denatures, packages, and resells alcohol products in smaller sizes, including tank trucks, totes, and drums, that typically garner a premium price to bulk alcohols. Eagle Alcohol delivers products to customers in the beverage, food, industrial and related-process industries via its own dedicated trucking fleet and common carrier.

Production Segments

We produce specialty alcohols, fuel-grade ethanol and essential ingredients, focusing on four key markets: *Health, Home & Beauty*; *Food & Beverage*; *Essential Ingredients*; and *Renewable Fuels*. Products for the *Health, Home & Beauty* markets include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for the *Food & Beverage* markets include grain neutral spirits, or GNS, used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for *Essential Ingredients* markets include dried yeast, corn protein meal, corn protein feed, corn germ, and distillers grains and liquid feed used in commercial animal feed and pet foods. We also sell yeast for human consumption. Our products for the *Renewable Fuels* markets include fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel and biodiesel fuels.

We produce our alcohols and essential ingredients at our production facilities described below. Our production facilities located in Illinois are in the heart of the Corn Belt, benefit from relatively low-cost and abundant feedstock and enjoy logistical advantages that enable us to provide our products to both domestic and international markets via truck, rail or barge. Our production facilities located in Oregon and Idaho are near their respective fuel and feed customers, offering significant timing, transportation cost and logistical advantages.

Our production facilities were operating for all of the first quarter except our Magic Valley plant in Idaho, which we temporarily hot-idled in January 2023 due to extreme natural gas prices, other unfavorable market conditions and to facilitate the installation of our new high protein systems at the plant. The facility was restarted in April 2023. All of our production facilities are currently operating. As market conditions change, we may increase, decrease or idle production at one or more operating facilities or resume operations at any idled facility.

		Annual Alcohol Production Capacity (estimated, in gallons)	
Production Facility	**Location**	**Fuel-Grade Ethanol**	**Specialty Alcohol**
Pekin Campus	Pekin, IL	110,000,000	140,000,000
Magic Valley	Burley, ID	60,000,000	—
Columbia	Boardman, OR	40,000,000	—

Marketing and Distribution Segment

We market and distribute all of the alcohols and essential ingredients we produce at our facilities. We also market and distribute alcohol produced by third parties.

We have extensive and long-standing customer relationships, both domestic and international, for our specialty alcohols and essential ingredients. These customers include producers and distributors of ingredients for cosmetics, sanitizers and related products, distilled spirits producers, food products manufacturers, producers of personal health/consumer health and personal care hygiene products, and global trading firms.

Our renewable fuel customers are located throughout the Western and Midwestern United States and consist of integrated oil companies and gasoline marketers who blend fuel-grade ethanol into gasoline. Our customers depend on us to provide a reliable supply of fuel-grade ethanol and manage the logistics and timing of delivery. Our customers collectively require fuel-grade ethanol volumes in excess of the supplies we produce at our facilities. We secure additional fuel-grade ethanol supplies from third-party ethanol producers. We arrange for transportation, storage and delivery of fuel-grade ethanol purchased by our customers through our agreements with third-party service providers in the Western United States as well as in the Midwest from a variety of sources.

We market our essential ingredient feed products to dairies and feedlots, in many cases located near our production facilities. These customers use our feed products for livestock as a substitute for corn and other sources of starch and protein. We sell our corn oil to poultry and biodiesel customers. We do not market essential ingredients from other producers.

See "Note 2 – Segments" to our Notes to Consolidated Financial Statements included elsewhere in this report for financial information about our business segments.

Current Initiatives and Outlook

Crush margins, particularly for fuel-grade ethanol, continued to improve during the second quarter. We also benefitted from favorable economics from our specialty alcohol and essential ingredients products, enabling us to generate net income and cash flow from operations, and to report positive Adjusted EBITDA of nearly $16 million.

We increased our production capacity utilization sequentially to 81% in the second quarter as compared to 70% in the first quarter and expect to further increase utilization based on two primary factors: first, when our corn oil extraction and high protein systems at our Magic Valley plant are fully aligned, we expect to achieve optimal capacity at the facility; and second, the state of Washington recently approved a new low-carbon fuel standard that justifies shipping fuel-grade ethanol from our Columbia plant, thereby opening a new low-carbon fuel market for the facility.

Given our positive crush margins for the month of July, we locked in positive spreads for a portion of our production. As a result of these favorable spreads and a positive forward crush margin curve, we expect positive Adjusted EBITDA for the third quarter.

We continue to make significant capital expenditures to support our business transformation, diversify our revenue streams and reduce our exposure to often volatile commodity markets. Since late 2019, we have focused on modifying our operations to pursue low-cost, high-value initiatives to expand margins and increase profitability. In 2020, when demand for pharmaceutical grade alcohol rose sharply due to the pandemic, we were prepared to serve the market as a long-standing producer of high-quality alcohols. We successfully increased our market share and improved our top- and bottom-line financial results. Since then, we have made considerable progress on our business strategy, strengthening our balance sheet and liquidity as well as accelerating investment in longer-term projects. We are successfully executing our plan to transform Alto Ingredients and to achieve our long-term EBITDA targets. For the second quarter, capital expenditures totaled $8 million, bringing our investments in capital projects to $18 million for the first half of 2023.

Our near-term focus has been to increase production of high-quality products, including grain neutral spirits, or GNS, corn oil and high protein products. We have also focused on developing and executing strategies to improve plant efficiency and reliability by adding corn storage and other upgrades. We are now preparing to install a natural gas pipeline at our Pekin Campus, convert our biogas waste to renewable natural gas, produce primary yeast, expand our cogeneration capabilities and, most importantly, launch carbon capture and sequestration, or CCS.

Each of our projects has a different timeline yet we remain focused on capital efficiency. For our near-term endeavors, we are using our working capital resources, cash generated from our operations and excess availability under our credit facilities. For our longer-term projects, we continue to hold productive discussions with strategic partners to fulfill our capital needs as appropriate.

We now produce, at our Pekin Campus wet mill, the highest quality 192 proof and ultra-low moisture 200 proof GNS products on the market. We are working to obtain qualifications that will position us to contract for additional high value GNS sales to new and existing beverage customers during the annual contracting period for 2024. We will also continue to supply GNS, especially our unique highly differentiated ultra-low moisture 200 proof product, on a spot sale basis for the remainder of 2023.

At our Magic Valley plant, we continue to align the CoProMax™ corn oil extraction and high protein systems and we are working to obtain dryer permits to achieve the full production capacity integral to optimizing low-cost production of fuel-grade ethanol, corn oil, high protein and other feed products. We expect to achieve full production value for these products in the fourth quarter.

As part of our longer-term initiatives for high-margin offerings, we plan to expand into primary yeast production. Our design work is on schedule and progressing well. Unfortunately, inflationary pressures have negatively impacted costs, and we expect our overall installation cost will be higher than originally anticipated. Fortunately, product prices for primary yeast have also risen. Assuming product returns remain justified, we will continue to target construction commencement in early 2024.

Our CCS project presents a unique and compelling opportunity at our Pekin Campus, which produces approximately 700,000 metric tons of carbon annually. The campus is located above the Mount Simon sandstone formation, one of the most significant carbon storage resources in the United States, and is proximate to the Illinois Basin, one of the largest carbon sequestration locations. Based solely on our annual carbon production volume at $85 per metric ton, reflecting the 45Q tax incentive benefits established under the Inflation Reduction Act of 2022, we believe we can generate over $30 million in EBITDA annually, after accounting for operating and sequestration costs, and excluding any of the substantial additional economic benefits of the environmental attributes associated with low carbon ethanol, including 45Z benefits and use in the production of ethanol-to-jet fuel, blue ethanol, synthetic natural gas and sustainable aviation fuel. We have selected a third-party front-end engineering design, or FEED, firm to determine capture, compression and engineering design. In addition, we have selected our development partner to provide turnkey transportation, sequestration and monitoring services.

Our CCS project requires upgrades to our natural gas pipeline and cogeneration projects, both of which have excellent projected returns on a standalone basis. Our longer-term goal is to have our CCS project operational by the end of 2026, which represents an aggressive but achievable schedule.

We continue to advance our initiatives to improve plant efficiency, reliability, redundancy and capacity. Our new 850,000-bushel corn storage silo at our Pekin Campus is now fully operational and contributing to improved corn procurement costs, greater plant reliability and lower plant operating costs across the production facility.

Our third-party FEED study for our new natural gas pipeline at our Pekin Campus is complete. We are finalizing easements and access while targeting construction commencement before year-end. Our goal is to improve energy procurement, pricing and stability, lowering our natural gas costs at our Pekin Campus. The pipeline will also create the opportunity for a new revenue stream by allowing us to convert and monetize our current biogas waste stream into renewable natural gas.

Our third-party FEED study for cogeneration at our Pekin Campus is complete. We have also furthered our design and preparation work and initiated financing discussions. We expect that our cogeneration capabilities at our Pekin Campus will address our energy needs for both our current operations as well as our expanded operations from our in-progress capital projects.

We remain focused on renewable products, underscoring our ongoing commitment to sustainability. As part of this pursuit, during the second quarter, we achieved EcoVadis Silver Medal status at our Pekin and ICP plants, indicating sustainability ratings in the 80th percentile amongst our peers. We take pride in these awards and of our team efforts to build and strengthen procedures and implement programs focused on our sustainability, health and safety.

Our team is dedicated to driving sustainable long-term value for all stakeholders, including customers, employees and investors. As part of that mission, our management, together with our board, continually pursue opportunities to maximize the value of our assets through capital investment and partnerships with strategic third-party industrial enterprises that share our vision. We believe this approach provides the best option to liberate our inherent value. Where appropriate, we have also elected to sell non-core assets, including our Aurora, Nebraska, Madera, California and Stockton, California production facilities, and invest the proceeds in more productive and profitable alternatives.

Our team is experienced and committed to leveraging our assets to deliver more diversified, higher value, sustainable revenue streams from our specialty alcohol and essential ingredient products. Our strategic plan is coming to fruition, as evidenced by our new high-quality products and the benefits accruing from our production cost improvements. The aggregate sum of our parts carries far greater intrinsic value than the individual pieces and will be an even higher value when CCS is deployed. As such, we continue to be excited about our capital projects, and with the completion of our near-term projects, we expect to increase EBITDA on an annualized basis by over $65 million by the end of 2025 and expect to increase that amount to approximately $125 million by the end of 2026 when our CCS, cogeneration and other long-term initiatives are fully realized.

Use of Non-GAAP Financial Measures

Management believes that certain financial measures not in accordance with generally accepted accounting principles, or GAAP, are useful measures of operations. Management provides EBITDA and Adjusted EBITDA as non-GAAP financial measures so that investors will have the same financial information that management uses, which may assist investors in properly assessing our performance on a period-over-period basis.

We define EBITDA as unaudited consolidated net income (loss) before interest expense, interest income, provision for income taxes and depreciation and amortization expense. We define Adjusted EBITDA as unaudited consolidated net income (loss) before interest expense, interest income, provision for income taxes, asset impairments, loss on extinguishment of debt, acquisition-related expense, fair value adjustments, and depreciation and amortization expense.

A table is provided below to reconcile Adjusted EBITDA to its most directly comparable GAAP measure, consolidated net income (loss). EBITDA and Adjusted EBITDA are not measures of financial performance under GAAP and should not be considered as alternatives to consolidated net income (loss) or any other measure of performance under GAAP, or to cash flows from operating, investing or financing activities as an indicator of cash flows or as a measure of liquidity. EBITDA and Adjusted EBITDA have limitations as analytical tools and you should not consider these measures in isolation or as a substitute for analysis of our results as reported under GAAP.

Information reconciling forward-looking EBITDA to forward-looking consolidated net income (loss) would require a forward-looking statement of consolidated net income (loss) prepared in accordance with GAAP, which is unavailable to us without unreasonable effort. We are not able to provide a quantitative reconciliation of forward-looking EBITDA to forward-looking consolidated net income (loss) because certain items required for reconciliation are uncertain, outside of our control and/or cannot reasonably be predicted, such as net sales, cost of goods sold, provision (benefit) for income taxes and asset impairments, which we view as the most material components of consolidated net income (loss) that are not presently estimable.

Reconciliation of Adjusted EBITDA to Consolidated Net Income (Loss)

	Three Months Ended June 30,		**Six Months Ended June 30,**	
(in thousands) (unaudited)	**2023**	**2022**	**2023**	**2022**
Net income (loss)	$ 7,595	$ 22,115	$ (5,571)	$ 19,513
Adjustments:				
Interest expense	1,734	319	3,299	519
Interest income	(190)	(145)	(411)	(303)
Asset impairments	—	—	574	—
Acquisition-related expense	700	875	1,400	1,750
Depreciation and amortization expense	5,681	6,728	11,735	12,861
Total adjustments	7,925	7,777	16,597	14,827
Adjusted EBITDA	$ 15,520	$ 29,892	$ 11,026	$ 34,340

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of net sales and expenses for each period. We believe that of our significant accounting policies, the following critical accounting policies and estimates are those policies that we believe are the most important to the portrayal of our financial condition and results of operations and that require management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain: accounting for business combinations; revenue recognition; impairment of long-lived assets and held-for-sale classification; valuation allowance for deferred taxes and derivative instruments. Except as noted below, these significant accounting principles are more fully described in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates" in our Annual Report on Form 10-K for the year ended December 31, 2022.

Results of Operations

The following selected financial information should be read in conjunction with our consolidated financial statements and notes to our consolidated financial statements included elsewhere in this report, and the other sections of "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in this report.

Certain performance metrics that we believe are important indicators of our results of operations include:

	Three Months Ended June 30, 2023	Three Months Ended June 30, 2022	Percentage Variance	Six Months Ended June 30, 2023	Six Months Ended June 30, 2022	Percentage Variance
Renewable fuel production gallons sold (in millions)	51.2	51.3	(0.1)%	94.5	100.4	(5.9)%
Specialty alcohol production gallons sold (in millions)	16.6	25.8	(35.7)%	38.0	49.1	(22.6)%
Third-party renewable fuel gallons sold (in millions)	26.6	30.0	(11.3)%	60.4	60.8	(0.7)%
Total gallons sold (in millions)	94.4	107.1	(11.9)%	192.9	210.3	(8.3)%
Total gallons produced (in millions)	70.5	77.0	(8.4)%	131.1	151.3	(13.4)%
Production capacity utilization	78%	88%	(11.4)%	76%	85%	(10.6)%
Average sales price per gallon	$ 2.63	$ 2.84	(7.4)%	$ 2.53	$ 2.65	(4.5)%
Corn cost per bushel – CBOT equivalent	$ 6.52	$ 7.46	(12.6)%	$ 6.56	$ 6.84	(4.1)%
Average basis [1]	$ 0.80	$ 0.69	15.9%	$ 0.63	$ 0.66	(4.5)%
Delivered cost of corn	$ 7.32	$ 8.15	(10.2)%	$ 7.19	$ 7.50	(4.1)%
Total essential ingredients tons sold (in thousands)	364.1	414.1	(12.1)%	663.4	812.9	(18.4)%
Essential ingredients revenues as % of delivered cost of corn[2]	37.6%	32.7%	15.0%	38.6%	34.6%	11.6%
Average CBOT ethanol price per gallon	$ 2.46	$ 2.73	(9.9)%	$ 2.33	$ 2.50	(6.8)%
Average CBOT corn price per bushel	$ 6.25	$ 7.78	(19.7)%	$ 6.42	$ 7.25	(11.4)%

(1) Corn basis represents the difference between the immediate cash price of delivered corn and the future price of corn for Chicago delivery.

(2) Essential ingredients revenues as a percentage of delivered cost of corn shows our yield based on sales of essential ingredients, including wet distillers grains and corn oil, generated from alcohol we produced.

Net Sales, Cost of Goods Sold and Gross Profit

The following table presents our net sales, cost of goods sold and gross profit in dollars and gross profit as a percentage of net sales (in thousands, except percentages):

	Three Months Ended June 30, 2023	Three Months Ended June 30, 2022	Variance in Dollars	Variance in Percent	Six Months Ended June 30, 2023	Six Months Ended June 30, 2022	Variance in Dollars	Variance in Percent
Net sales	$ 317,297	$ 362,189	$ (44,892)	(12.4)%	$ 631,188	$ 670,307	$ (39,119)	(5.8)%
Cost of goods sold	300,116	353,345	(53,229)	(15.1)%	617,171	656,690	(39,519)	(6.0)%
Gross profit	$ 17,181	$ 8,844	$ 8,337	94.3%	$ 14,017	$ 13,617	$ 400	2.9%
Percentage of net sales	*5.4%*	*2.4%*			*2.2%*	*2.0%*		

Three months ended June 30, 2023 as compared to the three months ended June 30, 2022

Net Sales

The decline in our consolidated net sales for the three months ended June 30, 2023 as compared to the same period in 2022 was primarily due to fewer total gallons sold on a gross basis, mainly specialty alcohol, and lower average sales prices per gallon of alcohol and per ton of essential ingredients. We produced and sold fewer gallons of specialty alcohol to align production and sales volumes with our customer order volumes during the quarter. We marketed no third-party gallons on a net basis during the quarter since we had previously ended our contractual relationship with the two fuel-grade ethanol plants for which we sold their production to instead focus on sales of our own fuel-grade ethanol production.

Pekin Campus Production Segment

Net sales of alcohol from our Pekin Campus production segment decreased by $16.1 million, or 11%, to $127.7 million for the three months ended June 30, 2023 as compared to $143.8 million for the same period in 2022. Our total volume of production gallons sold decreased by 1.8 million gallons, or 3%, to 50.2 million gallons for the three months ended June 30, 2023 as compared to 52.0 million gallons for the same period in 2022. At the segment's average sales price per gallon of $2.54 for the three months ended June 30, 2023, we generated $4.6 million less in net sales from the 1.8 million fewer gallons of alcohol sold in the three months ended June 30, 2023 as compared to the same period in 2022. The decrease of $0.22, or 8%, in the segment's average sales price per gallon for the three months ended June 30, 2023 as compared to the same period in 2022 reduced our net sales from the segment by $11.5 million.

Net sales of essential ingredients from our Pekin Campus production segment decreased $5.9 million, or 10%, to $54.0 million for the three months ended June 30, 2023 as compared to $59.9 million for the same period in 2022. Our total volume of essential ingredients sold increased by 73,800 tons, or 34%, to 291,700 tons for the three months ended June 30, 2023 from 217,900 tons for the same period in 2022. At the segment's average sales price per ton of $184.96 for the three months ended June 30, 2023, we generated $13.6 million in additional net sales from the 73,800 additional tons of essential ingredients sold in the three months ended June 30, 2023 as compared to the same period in 2022. The decrease of $89.72, or 33%, in the segment's average sales price per ton for the three months ended June 30, 2023 as compared to the same period in 2022 reduced our net sales from the segment by $19.5 million.

Marketing and Distribution Segment

Net sales of alcohol from our marketing and distribution segment, excluding intersegment sales, increased by $8.8 million, or 14%, to $72.7 million for the three months ended June 30, 2023 as compared to $63.9 million for the same period in 2022.

Our volume of third-party alcohol sold reported gross by the segment increased by 5.8 million gallons, or 28%, to 26.6 million gallons for the three months ended June 30, 2023 as compared to 20.8 million gallons for the same period in 2022. At the segment's average sales price per gallon of $2.73 for the three months ended June 30, 2023, we generated $15.8 million in additional net sales from the 5.8 million additional gallons of third-party alcohol sold gross in the three months ended June 30, 2023 as compared to the same period in 2022.

Our volume of alcohol sold reported net by the segment decreased by 9.2 million gallons, or 100%, to no gallons sold net for the three months ended June 30, 2023 as compared to 9.2 million gallons for the same period in 2022. This decline reduced net sales by $0.2 million.

The $0.33 per gallon, or 11%, decrease in the segment's average sales price per gallon for the three months ended June 30, 2023 as compared to the same period in 2022 resulted in a $6.8 million decline in our net sales from third-party fuel-grade ethanol sold by the segment.

Other Production Segment

Net sales of alcohol from our Other production segment decreased by $22.8 million, or 34%, to $44.4 million for the three months ended June 30, 2023 as compared to $67.2 million for the same period in 2022. Our total volume of alcohol sold declined by 6.1 million gallons, or 27%, to 16.5 million gallons for the three months ended June 30, 2023 as compared to 22.6 million gallons for the same period in 2022. At the segment's average sales price per gallon of $2.69 for the three months ended June 30, 2023, we generated $16.4 million less in net sales from the 6.1 million fewer gallons of alcohol sold in the three months ended June 30, 2023 as compared to the same period in 2022. The decrease of $0.28, or 10%, in the segment's average sales price per gallon for the three months ended June 30, 2023 as compared to the same period in 2022 reduced our net sales from the segment by $6.4 million. The decline in gallons sold by our other production segment resulted from the idling of our Magic Valley plant due to unfavorable market conditions and to facilitate the installation of our new high protein systems at the plant.

Net sales of essential ingredients from our other production segment decreased by $9.0 million, or 38%, to $14.4 million for the three months ended June 30, 2023 as compared to $23.4 million for the same period in 2022. Our total volume of essential ingredients sold declined by 123,800 tons, or 63%, to 72,400 tons for the three months ended June 30, 2023 from 196,200 tons for the same period in 2022. At the segment's average sales price per ton of $199.19 for the three months ended June 30, 2023, we generated $24.7 million less in net sales from the 123,800 fewer tons of essential ingredients sold in the three months ended June 30, 2023 as compared to the same period in 2022. The increase of $80.06, or 68%, in our average sales price per ton for the three months ended June 30, 2023 as compared to the same period in 2022 increased our net sales of essential ingredients from the segment by $15.7 million.

Corporate and other

Net sales of alcohol from corporate and other remained flat at $4.1 million for the three months ended June 30, 2023 as compared to the same period in 2022. These sales are from Eagle Alcohol's business.

Cost of Goods Sold and Gross Profit

Our consolidated gross profit increased to $17.2 million for the three months ended June 30, 2023 from $8.8 million for the same period in 2022, representing a gross margin of 5.4% for the three months ended June 30, 2023 compared to a gross profit margin of 2.4% for the same period in 2022. Our consolidated gross profit increased due to improved commodity margins as a result of lower corn costs relative to the price of fuel-grade ethanol.

Pekin Campus Production Segment

Our Pekin Campus production segment's gross profit, net of intercompany activity, improved by $5.7 million to a gross profit of $14.3 million for the three months ended June 30, 2023 as compared to gross profit of $8.6 million for the same period in 2022. This improvement in gross profit is primarily attributable to higher fuel-grade ethanol margins.

Marketing and Distribution Segment

Our marketing and distribution segment's gross profit, net of intercompany activity, improved by $1.0 million to a gross profit of $1.1 million for the three months ended June 30, 2023 as compared to $0.1 million for the same period in 2022. Of this improvement, $0.8 million is attributable to higher margins from sales of third-party fuel-grade ethanol and $0.2 million is attributable to higher sales volumes for the three months ended June 30, 2023 as compared to the same period in 2022.

Other Production Segment

Our other production segment's gross profit, net of intercompany activity, improved by $1.9 million to a gross profit of $1.1 million for the three months ended June 30, 2023 as compared to a gross loss of $0.8 million for the same period in 2022. Of this improvement, $2.3 million is attributable to higher fuel-grade ethanol margins, partially offset by $0.4 million in lower volumes sold.

Corporate and other

Gross profit from corporate and other declined by $0.2 million to a gross profit of $0.7 million for the three months ended June 30, 2023 as compared to $0.9 million for the same period in 2022, all of which were from Eagle Alcohol's business.

Six months ended June 30, 2023 as compared to the six months ended June 30, 2022

Net Sales

The decline in our consolidated net sales for the six months ended June 30, 2023 as compared to the same period in 2022 was primarily due to fewer total gallons sold, mainly specialty alcohol, an overall lower average sales price per gallon and lower volumes of essential ingredients sold. We produced and sold fewer gallons of specialty alcohol to align production and sales volumes with our customer order volumes during the period. We marketed no third-party gallons on a net basis during the period since we had previously ended our contractual relationship with the two fuel-grade ethanol plants for which we sold their production to instead focus on sales of our own fuel-grade ethanol production.

Pekin Campus Production Segment

Net sales of alcohol from our Pekin Campus production segment increased by $0.3 million, or less than 1%, to $260.1 million for the six months ended June 30, 2023 as compared to $259.8 million for the same period in 2022. Our total volume of production gallons sold increased by 4.7 million gallons, or 5%, to 106.0 million gallons for the six months ended June 30, 2023 as compared to 101.3 million gallons for the same period in 2022. At the segment's average sales price per gallon of $2.45 for the six months ended June 30, 2023, we generated $11.5 million in additional net sales from the 4.7 million additional gallons of alcohol sold in the six months ended June 30, 2023 as compared to the same period in 2022. The decrease of $0.11, or 4%, in the segment's average sales price per gallon for the six months ended June 30, 2023 as compared to the same period in 2022 reduced our net sales from the segment by $11.2 million.

Net sales of essential ingredients from our Pekin Campus production segment increased $2.5 million, or 2%, to $117.6 million for the six months ended June 30, 2023 as compared to $115.1 million for the same period in 2022. Our total volume of essential ingredients sold increased by 7,300 tons, or 2%, to 434,100 tons for the six months ended June 30, 2023 from 426,800 tons for the same period in 2022. At the segment's average sales price per ton of $270.87 for the six months ended June 30, 2023, we generated $2.0 million in additional net sales from the 7,300 additional tons of essential ingredients sold in the six months ended June 30, 2023 as compared to the same period in 2022. The increase of $1.11, or less than 1%, in the segment's average sales price per ton for the six months ended June 30, 2023 as compared to the same period in 2022 increased our net sales from the segment by $0.5 million.

Marketing and Distribution Segment

Net sales of alcohol from our marketing and distribution segment, excluding intersegment sales, increased by $39.0 million, or 33%, to $157.2 million for the six months ended June 30, 2023 as compared to $118.2 million for the same period in 2022.

Our volume of third-party alcohol sold reported gross by the segment increased by 19.7 million gallons, or 48%, to 60.4 million gallons for the six months ended June 30, 2023 as compared to 40.7 million gallons for the same period in 2022. At the segment's average sales price per gallon of $2.60 for the six months ended June 30, 2023, we generated $51.2 million in additional net sales from the 19.7 million additional gallons of third-party alcohol sold gross in the six months ended June 30, 2023 as compared to the same period in 2022.

Our volume of alcohol sold reported net by the segment decreased by 20.1 million gallons, or 100%, to no gallons sold net for the six months ended June 30, 2023 as compared to 20.1 million gallons for the same period in 2022. This decline reduced net sales by $0.4 million.

The $0.29 per gallon, or 10%, decrease in the segment's average sales price per gallon for the six months ended June 30, 2023 as compared to the same period in 2022 resulted in a $11.7 million decline in our net sales from third-party fuel-grade ethanol sold by the segment.

Other Production Segment

Net sales of alcohol from our other production segment decreased by $61.7 million, or 49%, to $65.3 million for the six months ended June 30, 2023 as compared to $127.0 million for the same period in 2022. Our total volume of alcohol sold declined by 21.3 million gallons, or 47%, to 24.4 million gallons for the six months ended June 30, 2023 as compared to 45.7 million gallons for the same period in 2022. At the segment's average sales price per gallon of $2.68 for the six months ended June 30, 2023, we generated $57.0 million less in net sales from the 21.3 million fewer gallons of alcohol sold in the six months ended June 30, 2023 as compared to the same period in 2022. The decrease of $0.10, or 4%, in the segment's average sales price per gallon for the six months ended June 30, 2023 as compared to the same period in 2022 reduced our net sales from the segment by $4.7 million. The decline in gallons sold by our other production segment resulted from the idling of our Magic Valley plant due to unfavorable market conditions and to facilitate the installation of our new high protein systems at the plant. We restarted our Magic Valley facility in April 2023, but did not achieve higher fuel-grade ethanol production levels until later in the second quarter.

Net sales of essential ingredients from our other production segment decreased by $19.5 million, or 46%, to $22.8 million for the six months ended June 30, 2023 as compared to $42.3 million for the same period in 2022. Our total volume of essential ingredients sold declined by 156,800 tons, or 41%, to 229,300 tons for the six months ended June 30, 2023 from 386,100 tons for the same period in 2022. At the segment's average sales price per ton of $99.32 for the six months ended June 30, 2023, we generated $15.6 million less in net sales from the 156,800 fewer tons of essential ingredients sold in the six months ended June 30, 2023 as compared to the same period in 2022. The decrease of $10.27, or 9%, in our average sales price per ton for the six months ended June 30, 2023 as compared to the same period in 2022 reduced our net sales of essential ingredients from the segment by $3.9 million.

Corporate and other

Net sales of alcohol from corporate and other increased by $0.4 million, or 5%, to $8.3 million for the six months ended June 30, 2023, as compared to $7.9 million for the same period in 2022. These sales are from Eagle Alcohol's business.

Cost of Goods Sold and Gross Profit

Our consolidated gross profit increased to $14.0 million for the six months ended June 30, 2023 from $13.6 million for the same period in 2022, representing a gross margin of 2.2% for the six months ended June 30, 2023 compared to a gross profit margin of 2.0% for the same period in 2022. Our consolidated gross profit improved due to improved commodity margins as a result of lower corn costs relative to the price of ethanol.

Pekin Campus Production Segment

Our Pekin Campus production segment's gross profit, net of intercompany activity, increased by $0.2 million to a gross profit of $12.5 million for the six months ended June 30, 2023 as compared to gross profit of $12.3 million for the same period in 2022.

Marketing and Distribution Segment

Our marketing and distribution segment's gross profit, net of intercompany activity, improved by $2.8 million to a gross profit of $2.4 million for the six months ended June 30, 2023 as compared to a gross loss of $0.4 million for the same period in 2022. Of this improvement, $2.2 million is attributable to higher margins from sales of third-party fuel-grade ethanol and $0.6 million is attributable to higher sales volumes for the six months ended June 30, 2023 as compared to the same period in 2022.

Other Production Segment

Our other production segment's gross profit, net of intercompany activity, declined by $3.4 million to a gross loss of $3.4 million for the six months ended June 30, 2023 as compared to a gross loss of less than $0.1 million for the same period in 2022. Of this decline, $4.7 million is attributable to lower fuel-grade ethanol margins, partially offset by $1.3 million in savings from lower volumes sold at negative margins as our Magic Valley plant was idled for the entire first quarter of 2023.

Corporate and other

Gross profit from corporate and other improved by $0.7 million to a gross profit of $2.5 million for the six months ended June 30, 2023 as compared to $1.8 million for the same period in 2022, all of which were from Eagle Alcohol's business.

Selling, General and Administrative Expenses

The following table presents our selling, general and administrative, or SG&A, expenses in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended June 30,		Variance in		Six Months Ended June 30,		Variance in	
	2023	2022	Dollars	Percent	2023	2022	Dollars	Percent
Selling, general and administrative expenses	$ 7,911	$ 8,996	$ (1,085)	(12.1)%	$ 15,793	$ 16,625	$ (832)	(5.0)%
Percentage of net sales	*2.5%*	*2.5%*			*2.5%*	*2.5%*		

Our SG&A expenses decreased for the three and six months ended June 30, 2023 as compared to the same period in 2022. The period over period decreases in SG&A expenses are primarily due to reduced professional services fees from diligence work on debt financing and lower accruals in the 2023 period related to deferred payments according to schedule for our acquisition of Eagle Alcohol.

Interest Expense, net

The following table presents our interest expense, net in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended June 30,		Variance in		Six Months Ended June 30,		Variance in	
	2023	2022	Dollars	Percent	2023	2022	Dollars	Percent
Interest Expense, net	$ 1,734	$ 319	$ 1,415	443.6%	$ 3,299	$ 519	$ 2,780	535.6%
Percentage of net sales	*0.5%*	*0.1%*			*0.5%*	*0.1%*		

Our interest expense increased for the three and six months ended June 30, 2023 as compared to the same period in 2022. The increase resulted from higher debt balances due to our recent term loan to fund our capital improvement projects.

Income from Cash Grant

We applied for and received a $22.7 million cash grant from the USDA's Biofuel Producer Program for the three and six months ended June 30, 2022. No such amounts were received for the three and six months ended June 30, 2023. The program was created as part of the CARES Act in 2020, which allocated $700 million to support biofuel producers who experienced market losses due to the pandemic. The grant is not required to be repaid nor will it recur in the future.

Net Income (Loss) Available to Common Stockholders

The following table presents our net income (loss) available to common stockholders in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended June 30,		Variance in		Six Months Ended June 30,		Variance in	
	2023	2022	Dollars	Percent	2023	2022	Dollars	Percent
Net income (loss) available to common stockholders	$ 7,184	$ 21,516	$ (14,332)	(66.6)%	$ (6,198)	$ 18,635	$ (24,833)	NM*
Percentage of net sales	*2.3%*	*5.9%*			*(1.0)%*	*2.8%*		

* *Not meaningful.*

The decrease in our net income available to common stockholders for the three and six months ended June 30, 2023 as compared to the same periods in 2022 is primarily due to non-recurring income in 2022 from a cash grant under the CARES Act in the amount of $22.7 million, as discussed above.

Liquidity and Capital Resources

During the six months ended June 30, 2023, we funded our operations primarily from proceeds from our line of credit and cash on hand. In addition to funding our operations, our capital resources were used to advance our capital improvement projects and make an annual payment for our acquisition of Eagle Alcohol. As of June 30, 2023, we had $25.1 million in cash, cash equivalents and restricted cash, $49.4 million available for borrowing under Kinergy's operating line of credit and $40 million available for borrowing under our Orion term loan. We also have an option to expand the Orion term loan by up to $25.0 million upon the satisfaction of certain conditions. We believe we have sufficient liquidity to meet our anticipated working capital, debt service and other liquidity needs for the next twelve months from the date of this report.

Quantitative Period-End Liquidity Status

We believe that the following amounts provide insight into our liquidity and capital resources. The following selected financial information should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included elsewhere in this report, and the other sections of "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in this report (dollars in thousands).

	June 30, 2023	December 31, 2022	Change
Cash, cash equivalents and restricted cash	$ 25,090	$ 49,525	(49.3)%
Current assets	$ 179,529	$ 199,121	(9.8)%
Property and equipment, net	$ 246,693	$ 239,069	3.2%
Current liabilities	$ 58,686	$ 78,017	(24.8)%
Long-term debt	$ 82,082	$ 68,356	20.1%
Working capital	$ 120,843	$ 121,104	(0.2)%
Working capital ratio	3.06	2.55	20.0%

Changes in Working Capital and Cash Flows

Working capital declined slightly to $120.8 million at June 30, 2023 from $121.1 million at December 31, 2022 due to a decrease of $19.6 million in current assets and a decrease of $19.3 million in current liabilities.

Current assets declined primarily due to a decrease in cash, cash equivalents and restricted cash of $24.4 million and a decrease in accounts receivable, partially offset by an increase in inventories and derivative assets due to higher average commodity prices for the six months ended June 30, 2023 as compared to the same period in 2022.

Our current liabilities decreased primarily due to lower accrued liabilities as a result of our payment of accrued contingent consideration for our acquisition of Eagle Alcohol and lower utility accruals in the current period, partially offset by an increase in the value of derivative instruments due to the end of period change in commodity prices for open contracts.

Our cash, cash equivalents and restricted cash declined by $24.4 million primarily due to $12.9 million in cash used in our operating activities and $21.5 million in cash used in our investing activities, partially offset by $9.9 million in cash provided by our financing activities, as further detailed below.

Cash used in our Operating Activities

We used $12.9 million in cash for our operating activities during the six months ended June 30, 2023 as compared to $20.7 million in cash provided by our operations for the same period in 2022. Specific factors that contributed to the change in cash from our operating activities include:

- a decrease of $25.1 million in our net income primarily due to a cash grant under the CARES Act in the prior year of $22.6 million that did not recur in 2023; and
- a decrease of $38.7 million related to accounts payable and accrued liabilities due to timing of payments.

These amounts were partially offset by:

- a decrease of $16.8 million related to derivative instruments due to changes in commodity prices;

- an increase of $10.2 million related to changes in inventories due to changes in commodity prices; and

- an increase of $5.7 million related to changes in accounts receivable balances due to the timing of our collections.

Cash used in our Investing Activities

We used $21.5 million in cash during the period to fund $18.0 million of additions to property and equipment, including for our capital improvement projects, and to fund $3.5 million of contingent purchase price payments for our acquisition of Eagle Alcohol. We used $8.2 million more in cash for additions to property and equipment during the current period as compared to the same period in 2022 as we accelerated our capital improvement projects in 2023. We generated $14.8 million less in cash from principal payments on notes receivable in the current period as compared to the same period in 2022 as the notes receivable from the sale of our Aurora, Nebraska facility fully matured and were repaid in 2022.

Cash provided by our Financing Activities

Cash provided by our financing activities was $9.9 million for the six months ended June 30, 2023, which reflects net proceeds of $13.2 million from Kinergy's operating line of credit, partially offset by $2.7 million of stock repurchases and $0.6 million paid in preferred stock dividends, as compared to $1.6 million of cash provided by our financing activities for the same period in 2022. Our use of Kinergy's line of credit generated an additional $11.1 million in cash in the current period as compared to the same period in 2022 due to higher commodity prices and the timing of payments and collections.

Kinergy's Operating Line of Credit

Kinergy maintains an operating line of credit for an aggregate amount of up to $100.0 million. The credit facility matures on November 7, 2027. Interest accrues under the credit facility at a rate equal to (i) the daily Secured Overnight Financing Rate, plus (ii) a specified applicable margin ranging from 1.25% to 1.75%. The credit facility's monthly unused line fee is 0.25% to 0.375% of the amount by which the maximum credit under the facility exceeds the average daily principal balance during the immediately preceding month. Payments that may be made by Kinergy to Alto Ingredients, Inc. as reimbursement for management and other services provided by Alto Ingredients, Inc. to Kinergy are limited under the terms of the credit facility to $1.5 million per fiscal quarter. The credit facility also includes the accounts receivable of our indirect wholly-owned subsidiary, Alto Nutrients, LLC, or Alto Nutrients, as additional collateral. Payments that may be made by Alto Nutrients to Alto Ingredients, Inc. as reimbursement for management and other services provided by Alto Ingredients, Inc. to Alto Nutrients are limited under the terms of the credit facility to $0.5 million per fiscal quarter. Alto Nutrients markets our essential ingredients and also provides raw material procurement services to our subsidiaries. In addition, the amount of cash distributions that Kinergy or Alto Nutrients may make to us is also limited to up to 75% of excess cash flow.

For all monthly periods in which excess borrowing availability falls below a specified level, Kinergy and Alto Nutrients must collectively maintain a fixed-charge coverage ratio (calculated as a twelve-month rolling earnings before interest, taxes, depreciation and amortization divided by the sum of interest expense, capital expenditures, principal payments of indebtedness, indebtedness from capital leases and taxes paid during such twelve-month rolling period) of at least 1.1 and are prohibited from incurring certain additional indebtedness (other than specific intercompany indebtedness). The obligations of Kinergy and Alto Nutrients under the credit facility are secured by all of our tangible and intangible assets.

We believe Kinergy and Alto Nutrients are in compliance with the fixed-charge coverage ratio covenant as of the filing of this report. The following table sets forth the fixed-charge coverage ratio financial covenant and the actual results for the periods presented:

	Three Months Ended June 30,		Years Ended December 31,	
	2023	2022	2022	2021
Fixed-Charge Coverage Ratio Requirement	1.10	2.00	1.10	2.00
Actual	3.89	8.72	3.54	13.32
Excess	2.79	6.72	2.44	11.32

Alto Ingredients, Inc. has guaranteed all of Kinergy's obligations under the credit facility. As of June 30, 2023, Kinergy had an outstanding balance of $31.3 million and $49.4 million of unused borrowing availability under the credit facility.

Orion Term Loan

On November 7, 2022, we entered into a credit agreement with certain funds managed by Orion Infrastructure Capital, or Lenders, under which the Lenders extended a senior secured credit facility in the amount of up to $125,000,000, or Term Loan. The Term Loan is secured by a first priority lien on certain of our assets and a second priority lien on certain assets of Kinergy and Alto Nutrients.

The Lenders agreed to advance up to $100,000,000, with up to an additional $25,000,000 upon the satisfaction of certain conditions. We committed to issue to the Lenders pro rata an aggregate of 1,282,051 shares of our common stock at the initial funding and up to an additional 320,513 shares of our common stock based upon certain further fundings under the credit facility. On November 23, 2022, we received our initial funding of $60,000,000 under the credit facility and issued an aggregate of 1,282,051 shares of our common stock to the Lenders. We received no separate consideration for the shares of common stock issued.

Interest accrues on the unpaid principal amount of the Term Loan at a fixed rate of 10% per annum. The Term Loan matures on November 7, 2028, or earlier upon acceleration.

We must prepay amounts outstanding under the Term Loan on a semi-annual basis beginning with the six-month period ending December 31, 2023 in an amount equal to a percentage of our excess cash flow based on a specified leverage ratio, as follows: (a) if our leverage ratio is greater than or equal to 3.0x, then the mandatory prepayment amount will equal 100% of our excess cash flow, (b) if our leverage ratio is less than 3.0x and greater than or equal to 1.5x, then the mandatory prepayment amount will equal 50% of our excess cash flow, and (c) if our leverage ratio is less than 1.5x, then the mandatory prepayment amount will equal 25% of our excess cash flow.

As of June 30, 2023, the amount outstanding under the Term Loan was $60,000,000.

Share Repurchase Program

For the three and six months ended June 30, 2023, we repurchased 389,000 and 1,249,000 shares of our common stock as part of our publicly announced share repurchase program at an average price per share of $2.57 and $2.15 for an aggregate expenditure of $1,001,000 and $2,683,000, respectively. See "Unregistered Sales of Equity Securities and Use of Proceeds – Purchases of Equity Securities by the Issuer and Affiliated Purchasers."

Other Cash Obligations

As of June 30, 2023, we had future commitments for certain capital projects totaling $17.4 million. These commitments are scheduled to be satisfied through 2024.

In connection with our acquisition of Eagle Alcohol, we committed to contingent payments of up to $5.5 million in cash over the next two years if certain targets are met.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We are exposed to various market risks, including changes in commodity prices as discussed below. Market risk is the potential loss arising from adverse changes in market rates and prices. In the ordinary course of business, we may enter into various types of transactions involving financial instruments to manage and reduce the impact of changes in commodity prices. We do not have material exposure to interest rate risk. We do not expect to have any exposure to foreign currency risk as we conduct all of our transactions in U.S. dollars.

We produce alcohol and essential ingredients. Our business is sensitive, in particular, to changes in the prices of ethanol and corn. In the ordinary course of business, we may enter into various types of transactions involving financial instruments to manage and reduce the impact of changes in ethanol and corn prices. We do not enter into derivatives or other financial instruments for trading or speculative purposes.

We are subject to market risk with respect to ethanol and corn pricing. Ethanol prices are sensitive to global and domestic ethanol supply; crude-oil supply and demand; crude-oil refining capacity; carbon intensity; government regulation, including governmental mandates for renewable fuel use; and consumer demand for alternative fuels. Our ethanol sales are priced using contracts that are either based on a fixed price or an indexed price tied to a specific market, such as the CBOT or the Oil Price Information Service. Under these fixed-priced arrangements, we are exposed to the risk of a decrease in the market price of ethanol between the time the price is fixed and the time the ethanol is sold.

We satisfy our physical corn needs, the principal raw material used to produce alcohol and essential ingredients, based on purchases from our corn vendors. Generally, we determine the purchase price of our corn at or near the time we begin to grind. Additionally, we also enter into volume contracts with our vendors to fix the purchase price. As such, we are also subject to market risk with respect to the price of corn. The price of corn is subject to wide fluctuations due to unpredictable factors such as weather conditions, farmer planting decisions, governmental policies with respect to agriculture and international trade, including trade and other sanctions that may be levied against grain producing countries, and global supply and demand. Under the fixed price arrangements, we assume the risk of a decrease in the market price of corn between the time the price is fixed and the time the corn is utilized.

Essential ingredients are sensitive to various demand factors such as numbers of livestock on feed, prices for feed alternatives, and supply factors, primarily the production of alcohol co-products by plants and other sources.

As noted above, we may attempt to reduce the market risk associated with fluctuations in the price of ethanol or corn by employing a variety of risk management and hedging strategies. Strategies include the use of derivative financial instruments such as futures and options executed on the CBOT and/or the New York Mercantile Exchange, as well as the daily management of physical corn supplies.

These derivatives are not designated for special hedge accounting treatment, and as such, the changes in the fair values of these contracts are recorded on the balance sheet and recognized immediately in cost of goods sold. We recognized net gains of $5.2 million and $21.9 million related to the changes in the fair values of these contracts for the six months ended June 30, 2023 and 2022, respectively.

At June 30, 2023, we prepared a sensitivity analysis to estimate our exposure to ethanol and corn. Market risk related to these factors was estimated as the potential change in pre-tax income resulting from a hypothetical 10% adverse change in the prices of our expected ethanol and corn volumes. The analysis uses average CBOT prices for the year and does not factor in future contracted volumes. The results of this analysis for the six months ended June 30, 2023, which may differ materially from actual results, are as follows (in millions):

Commodity	Volume	Unit of Measure	Approximate Adverse Change to Pre-Tax Income
Ethanol	192.9	Gallons	$ (30.9)
Corn	47.3	Bushels	$ (30.4)

ITEM 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission’s rules and forms. Disclosure controls and procedures also include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded as of June 30, 2023 that our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on the Effectiveness of Controls

Management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control systems are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in a cost-effective control system, no evaluation of internal control over financial reporting can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been or will be detected.

These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

We are subject to legal proceedings, claims and litigation arising in the ordinary course of business. While the amounts claimed may be substantial, the ultimate liability cannot presently be determined because of considerable uncertainties that exist. Therefore, it is possible that the outcome of those legal proceedings, claims and litigation could adversely affect our quarterly or annual operating results or cash flows when resolved in a future period. However, based on facts currently available, management believes such matters will not adversely affect in any material respect our financial condition, results of operations or cash flows.

ITEM 1A. RISK FACTORS.

Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described below in addition to the other information contained in this Report and in our other filings with the Securities and Exchange Commission, including subsequent reports on Forms 10-Q and 8-K. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. If any of these known or unknown risks or uncertainties actually occurs with material adverse effects on Alto Ingredients, our business, financial condition, results of operations and/or liquidity could be seriously harmed. In that event, the market price for our common stock will likely decline, and you may lose all or part of your investment.

Risks Related to our Business

Our results of operations and our ability to operate at a profit are largely dependent on our ability to manage the costs of corn, natural gas and other production inputs, with the prices of our alcohols and essential ingredients, all of which are subject to volatility and uncertainty.

Our results of operations are highly impacted by commodity prices, including the cost of corn, natural gas and other production inputs that we must purchase, and the prices of alcohols and essential ingredients that we sell. Prices and supplies are subject to and determined by numerous market and other forces over which we have no control, such as weather, domestic and global demand, supply shortages, export prices, inflationary conditions, global geopolitical tensions and various governmental policies in the United States and throughout the world.

Price volatility of corn, natural gas and other production inputs, and alcohols and essential ingredients, may cause our results of operations to fluctuate substantially. We may fail to generate expected levels of net sales and profits even under fixed-price and other contracts for the sale of specialty alcohols used in consumer products. Our customers may not pay us timely or at all, even under longer-term, fixed-price contracts for our specialty alcohols, and may seek to renegotiate prices under those contracts during periods of falling prices or high price volatility.

Over the past several years, for example, the spread between corn and fuel-grade ethanol prices has fluctuated significantly. Fluctuations are likely to continue to occur. A sustained negative or narrow spread, whether as a result of sustained high or increased corn prices or sustained low or decreased alcohol or essential ingredient prices, would adversely affect our results of operations and financial condition. Revenues from sales of alcohols, particularly fuel-grade ethanol, and essential ingredients have in the past and could in the future decline below the marginal cost of production, which may force us to suspend production, particularly fuel-grade ethanol production, at some or all of our facilities.

In addition, some of our fuel-grade ethanol marketing and distribution activities will likely be unprofitable in a market of generally declining prices due to the nature of our business. For example, to satisfy customer demands, we maintain certain quantities of fuel-grade ethanol inventory for subsequent resale. Moreover, we procure much of our fuel-grade ethanol inventory outside of contracted third-party marketing and distribution arrangements and therefore must buy fuel-grade ethanol at a price established at the time of purchase and sell fuel-grade ethanol at an index price established later at the time of sale that is generally reflective of movements in the market price of fuel-grade ethanol. As a result, our margins for fuel-grade ethanol sold in these transactions generally decline and may turn negative as the market price of fuel-grade ethanol declines.

We can provide no assurance that corn, natural gas or other production inputs can be purchased at or near current or any particular prices, or that our alcohols or essential ingredients will sell at or near current or any particular prices. Consequently, our results of operations and financial condition may be adversely affected by increases in the prices of corn, natural gas and other production inputs or decreases in the prices of our alcohols and essential ingredients.

Inflation, including as a result of commodity price inflation or supply chain constraints due to the war in Ukraine or other geopolitical events, and higher prices in general may adversely impact our results of operations.

We have experienced inflationary impacts on key production inputs, wages and other costs of labor, equipment, services, and other business expenses. Commodity prices in particular have risen significantly over the past two years. Inflation and its negative impacts could escalate in future periods.

Ukraine, prior to its war with Russia, was one of the largest exporters of grain in the world. Russia is one of the largest producers of grain, natural gas and oil, and is the largest exporter of fertilizers. The commodity price impact of the war in Ukraine has been a sharp and sustained rise in grain prices, including for corn, our most important production input commodity. In addition, the war in Ukraine has adversely affected and may continue to adversely affect global supply chains resulting in further commodity price inflation for our production inputs. Lower fertilizer supplies and higher prices may also impact future growing seasons, further impacting grain supplies and prices. India also recently banned certain rice exports to ensure adequate domestic availability at reasonable prices. Wheat, corn, rice and other grains are considered economic substitutes and their relative prices affect one another to varying degrees. Given higher global grain prices, U.S. farmers may prefer to lock in prices and export additional volumes, reducing domestic grain supplies and resulting in further inflationary pressures on key production inputs.

Even if inflation stabilizes or abates, the prices of key production inputs, wages and other costs of labor, equipment, services, and other business expenses may remain at elevated levels. We may not be able to include these additional costs in the prices of the products we sell. As a result, inflation and higher prices in general may have a material adverse effect on our results of operations and financial condition.

Increased alcohol or essential ingredient production or higher inventory levels may cause a decline in prices for those products, and may have other negative effects, adversely impacting our results of operations, cash flows and financial condition.

The prices of our alcohols and essential ingredients are impacted by competing third-party supplies of those products. For example, we believe that the most significant factor influencing the price of fuel-grade ethanol has been the substantial increase in production. According to the Renewable Fuels Association, domestic fuel-grade ethanol production capacity increased from an annualized rate of 1.5 billion gallons per year in January 1999 to a record 16.1 billion gallons in 2018. In addition, if fuel-grade ethanol production margins improve, we anticipate that owners of production facilities operating at below capacity, or owners of idled production facilities, will increase production levels, thereby resulting in more abundant fuel-grade ethanol supplies and inventories. Increases in the supply of alcohols and essential ingredients may not be commensurate with increases in demand for alcohols and essential ingredients, thus leading to lower prices. Any of these outcomes could have a material adverse effect on our results of operations, cash flows and financial condition.

The prices of our products are volatile and subject to large fluctuations, which may cause our results of operations to fluctuate significantly.

The prices of our products are volatile and subject to large fluctuations. For example, the market price of fuel-grade ethanol is dependent upon many factors, including the supply of ethanol and the price of gasoline, which is in turn dependent upon the price of petroleum which itself is highly volatile, difficult to forecast and influenced by a wide variety of geopolitical and global economic conditions, including decisions concerning petroleum output by the Organization of Petroleum Exporting Countries (OPEC) and their allies, an intergovernmental organization that seeks to manage the price and supply of oil on the global energy market. Our fuel-grade ethanol sales are tied to prevailing spot market prices rather than long-term, fixed-price contracts. Fuel-grade ethanol prices, as reported by the CBOT, ranged from $2.00 to $2.88 per gallon in 2022, from $1.48 to $3.75 per gallon in 2021 and from $0.81 to $1.62 per gallon in 2020. In addition, even under longer-term, fixed-price contracts for our specialty alcohols, our customers may seek to renegotiate prices under those contracts during periods of falling prices or high price volatility. Fluctuations in the prices of our products may cause our results of operations to fluctuate significantly.

Disruptions in our production or distribution, including as a result of climate change and other weather effects, may adversely affect our business, results of operations and financial condition.

Our business depends on the continuing availability of rail, road, port, storage and distribution infrastructure. In particular, due to limited storage capacity at some of our production facilities and other considerations related to production efficiencies, certain facilities depend on just-in-time delivery of corn. The production of alcohols also requires a significant and uninterrupted supply of other raw materials and energy, primarily water, electricity and natural gas. Local water, electricity and gas utilities may fail to reliably supply the water, electricity and natural gas that our production facilities need or may fail to supply those resources on acceptable terms. In the past, poor weather has caused disruptions in rail transportation, which slowed the delivery of fuel-grade ethanol by rail, a key method by which fuel-grade ethanol from our Pekin Campus is transported to market.

For example, in 2022, a lightning strike at the utility servicing our Pekin Campus disrupted our operations, cutting power to our facilities and materially affecting our production, resulting in unexpected repair and maintenance costs, lost production and degradation in the quality of work-in-progress inventories. In addition, in 2020, we experienced closure of the Illinois River for lock repairs which required greater use of less cost-effective modes of product transport such as via rail and truck, which resulted in higher costs and negatively affected our results of operations.

Disruptions in production or distribution, whether caused by labor difficulties, unscheduled downtimes and other operational hazards inherent in the alcohol production industry, including equipment failures, fires, explosions, abnormal pressures, blowouts, pipeline ruptures, transportation accidents, climate change and natural disasters such as earthquakes, floods and storms, or other weather effects, or human error or malfeasance or other reasons, could prevent timely deliveries of corn or other raw materials and energy, and could delay transport of our products to market, and may require us to halt production at one or more production facilities, any of which could have a material adverse effect on our business, results of operations and financial condition.

Some of these operational hazards may also cause personal injury or loss of life, severe damage to or destruction of property and equipment or environmental damage, and may result in suspension of operations and the imposition of civil or criminal penalties. Our insurance may not fully cover the potential hazards described above or we may be unable to renew our insurance on commercially reasonable terms or at all.

Climate change, and governmental regulations aimed at addressing climate-related issues, may affect conditions to which our business is highly sensitive, many of which could materially and adversely harm our business, results of operations and financial condition.

Our business is highly sensitive to commodity prices, in particular the prices of corn and grain substitutes, and natural gas. Inclement weather from climate change, including extreme temperatures or drought, may adversely affect growing conditions, which may reduce available corn supplies, our primary production input, and other grain substitutes, driving up prices and thereby increasing our production input costs. In addition, governmental regulators may disfavor carbon-based energy sources, such as natural gas, leading to regulations that disincentivize their use or otherwise make their production more difficult and costly, driving up their prices. Higher natural gas prices would likewise increase our production input costs.

Other factors that may result from climate change, or that may result from governmental regulations aimed at addressing climate-related issues, may also adversely affect our business, including the following:

- water is one of our key production inputs; water resource limitations may result from drought and other inclement weather; water resource limitations may also result from rationing and other governmental regulations limiting water use;

- higher water temperatures due to increased global or regional temperatures may negatively affect production efficiencies due to water temperature production requirements given the poor cooling capacities of our older facilities;

- flooding and other inclement weather may negatively affect our river access, other transportation logistics and costs, and storage requirements;

- an overall increase in energy costs will negatively impact our production costs generally and may critically impact certain high energy-intensive production technologies, such as our wet milling and multiple distillation processes for high-quality alcohol;

- regulatory and market transition away from combustion fuels and fuel-grade ethanol blending may threaten the viability of our renewable fuels business; and

- costs and regulatory burdens associated with governmental regulations that limit or tax greenhouse gas emissions, such as carbon dioxide, from alcohol production and distribution, or from truck transport and packaging associated with Eagle Alcohol’s business and use of drums and totes, will negatively impact us.

New legislation in the United States to address climate change issues, including at the federal, state and local levels, likely will continue. This includes new or expanded cap-and-trade programs that may layer additional costs on any business that emits greenhouse gases. New legislation, including new or expanded cap-and-trade programs, could materially and adversely impact our production cost structure and the market viability of our products.

Any of these factors could materially and adversely harm our business, results of operations and financial condition.

We may engage in hedging transactions and other risk mitigation strategies that could harm our results of operations and financial condition.

In an attempt to partially offset the effects of production input and product price volatility, in particular, corn and natural gas costs and fuel-grade ethanol prices, we may enter into contracts to purchase a portion of our corn or natural gas requirements on a forward basis or fix the sale price of portions of our alcohol production. In addition, we may engage in other hedging transactions involving exchange-traded futures contracts for corn, natural gas and unleaded gasoline from time to time. The financial statement impact of these activities is dependent upon, among other things, the prices involved and our ability to sell sufficient products to use all of the corn and natural gas for which forward commitments have been made. Hedging arrangements also expose us to the risk of financial loss in situations where our counterparty to the hedging contract defaults on its contract or, in the case of exchange-traded contracts, where there is a change in the expected differential between the underlying price in the hedging agreement and the actual prices paid or received by us. In addition, our open contract positions may require cash deposits to cover margin calls, negatively impacting our liquidity. As a result, our hedging activities and fluctuations in the price of corn, natural gas, fuel-grade ethanol and unleaded gasoline may adversely affect our results of operations, financial condition and liquidity.

Risks Related to our Finances

We have incurred significant losses and negative operating cash flow in the past and we may incur losses and negative operating cash flow in the future, which may hamper our operations and impede us from expanding our business.

We have incurred significant losses and negative operating cash flow in the past. For example, for the three months ended March 31, 2023, three months ended March 31, 2022, three months and year ended December 31, 2022 and for the year ended December 31, 2020, we incurred consolidated net losses of approximately $13.2 million, $2.6 million, $33.1 million, $41.6 million and $17.3 million, respectively. For the three months ended March 31, 2023, we experienced negative operating cash flow of approximately $23.3 million. We may incur losses and negative operating cash flow in the future. We expect to rely on cash on hand, cash, if any, generated from our operations, borrowing availability under our lines of credit and proceeds from our future financing activities, if any, to fund all of the cash requirements of our business. Additional losses and negative operating cash flow may hamper our operations and impede us from expanding our business.

We incur significant expenses to maintain and upgrade our production facilities and operating equipment, and any interruption in our operations would harm our operating performance.

We regularly incur significant expenses to maintain and upgrade our production facilities and operating equipment. The machines and equipment we use to produce our alcohols and essential ingredients are complex, have many parts, and some operate on a continuous basis. We must perform routine equipment maintenance and must periodically replace a variety of parts such as motors, pumps, pipes and electrical parts. In addition, our production facilities require periodic shutdowns to perform major maintenance and upgrades. These scheduled shutdowns result in lower sales and increased costs in the periods during which a shutdown occurs and could result in unexpected operational issues in future periods as a result of changes to equipment and operational and mechanical processes made during shutdown.

Our indebtedness may expose us to risks that could negatively impact our business, prospects, liquidity, cash flows and results of operations.

We have incurred, and anticipate incurring additional, substantial indebtedness to engage in capital improvement projects. We expect that these projects, when completed, will generate financial returns sufficient to service and ultimately repay or refinance our indebtedness. However, the timing, cost and results of our capital improvement projects may not meet our projections. In addition, our indebtedness could:

- make it more difficult to pay or refinance our indebtedness if it becomes due during adverse economic and industry conditions;
- limit our flexibility to pursue strategic opportunities or react to changes in our business and the industries in which we operate and, consequently, place us at a competitive disadvantage to our competitors who have less debt;
- require a substantial portion of our cash flows from operations for debt service payments, thereby reducing the availability of our cash flows to fund working capital, additional capital expenditures, acquisitions, dividend payments and for other general corporate purposes; or
- limit our ability to procure additional financing for working capital or other purposes.

Our ability to generate sufficient cash to make all required principal and interest payments when due depends on our performance, which is subject to a variety of factors beyond our control, including the cost of key production inputs, the supply of and demand for specialty alcohols and essential ingredients, and many other factors related to the industries in which we operate. We cannot provide any assurance that we will be able to timely service or satisfy our debt obligations. Our failure to timely service or satisfy our debt obligations would have a material adverse effect on our business, business prospects, liquidity, cash flows and results of operations.

Our ability to utilize net operating loss carryforwards and certain other tax attributes may be limited.

Federal and state income tax laws impose restrictions on our use of net operating loss, or NOL, and tax credit carryforwards in the event that an “ownership change” occurs for tax purposes, as defined by Section 382 of the Internal Revenue Code, or Code. In general, an ownership change occurs when stockholders owning 5% or more of a corporation entitled to use NOL or other loss carryforwards have increased their ownership by more than 50 percentage points during any three-year period. The annual base limitation under Section 382 of the Code is calculated by multiplying the corporation’s value at the time of the ownership change by the greater of the long-term tax-exempt rate determined by the Internal Revenue Service in the month of the ownership change or the two preceding months. Our ability to utilize our NOL and other loss carryforwards may be substantially limited. These limitations could result in increased future tax obligations, which could have a material adverse effect on our financial condition and results of operations.

Risks Related to Legal and Regulatory Matters

We may be adversely affected by environmental, health and safety laws, regulations and liabilities, and which may not be adequately covered by insurance.

We are subject to various federal, state and local environmental laws and regulations, including those relating to the discharge of materials into the air, water and ground; the generation, storage, handling, use, transportation and disposal of hazardous materials and wastes; and the health and safety of our employees. In addition, some of these laws and regulations require us to operate under permits that are subject to renewal or modification. These laws, regulations and permits often require expensive pollution control equipment or operational changes to limit actual or potential impacts to the environment. A violation of these laws and regulations or permit conditions may result in substantial fines, natural resource damages, criminal sanctions, permit revocations and/or production facility shutdowns. In addition, we have made, and expect to make, significant capital expenditures on an ongoing basis to comply with increasingly stringent environmental laws, regulations and permits.

We may be liable for the investigation and cleanup of environmental contamination at each of our production facilities and at off-site locations where we arrange for the disposal of hazardous substances or wastes. If these substances or wastes have been or are disposed of or released at sites that undergo investigation and/or remediation by regulatory agencies, we may be responsible under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, or other environmental laws for all or part of the costs of investigation and/or remediation, and for damages to natural resources. We may also be subject to related claims by private parties alleging property damage and personal injury due to exposure to hazardous or other materials at or from those properties. Some of these matters may require us to expend significant amounts for investigation, cleanup or other costs not covered by insurance.

In addition, new laws, new interpretations of existing laws, increased governmental enforcement of environmental laws or other developments could require us to make significant additional expenditures. Continued government and public emphasis on environmental issues will likely result in increased future investments for environmental controls at our production facilities. Present and future environmental laws and regulations, and interpretations of those laws and regulations, applicable to our operations, more vigorous enforcement policies and discovery of currently unknown conditions may require substantial expenditures that could have a material adverse effect on our results of operations and financial condition.

The hazards and risks associated with producing and transporting our products (including fires, natural disasters, explosions and abnormal pressures and blowouts) may also result in personal injury claims or damage to property and third parties. As protection against operating hazards, we maintain insurance coverage against some, but not all, potential losses. However, we could sustain losses for uninsurable or uninsured risks, or in amounts in excess of existing insurance coverages. Events that result in significant personal injury or damage to our property or third parties or other losses that are not fully covered by insurance could have a material adverse effect on our results of operations and financial condition.

Future demand for fuel-grade ethanol is uncertain and may be affected by changes to federal mandates, public perception, consumer acceptance and overall consumer demand for transportation fuel, any of which could negatively affect demand for fuel-grade ethanol and our results of operations.

Although many trade groups, academics and governmental agencies support fuel-grade ethanol as a fuel additive that promotes a cleaner environment, others criticize fuel-grade ethanol production as consuming considerably more energy and emitting more greenhouse gases than other biofuels and potentially depleting water resources. Some studies suggest that corn-based ethanol is less efficient than ethanol produced from other feedstock and that it negatively impacts consumers by causing increased prices for dairy, meat and other food generated from livestock that consume corn. Additionally, critics of fuel-grade ethanol contend that corn supplies are redirected from international food markets to domestic fuel markets. If negative views of corn-based ethanol production gain broader acceptance, support for existing measures promoting use and domestic production of corn-based ethanol as a fuel additive could decline, leading to a reduction or repeal of federal ethanol usage mandates, which would materially and adversely affect the demand for fuel-grade ethanol. These views could also negatively impact public perception of the fuel-grade ethanol industry and acceptance of ethanol as an alternative fuel.

There are limited markets for fuel-grade ethanol beyond those established by federal mandates. Discretionary blending and E85 blending (i.e., gasoline blended with up to 85% fuel-grade ethanol by volume) are important secondary markets. Discretionary blending is often determined by the price of fuel-grade ethanol relative to the price of gasoline. In periods when discretionary blending is financially unattractive, the demand for fuel-grade ethanol may decline. Also, the demand for fuel-grade ethanol is affected by the overall demand for transportation fuel. Demand for transportation fuel is affected by the number of miles traveled by consumers and vehicle fuel economy. Lower demand for fuel-grade ethanol and essential ingredients would reduce the value of our ethanol and related products, erode our overall margins and diminish our ability to generate revenue or to operate profitably. In addition, we believe that consumer acceptance of E15 and E85 fuels is necessary before fuel-grade ethanol can achieve any significant growth in market share relative to other transportation fuels.

The United States fuel-grade ethanol industry is highly dependent upon various federal and state laws and any changes in those laws could have a material adverse effect on our results of operations, cash flows and financial condition.

The domestic market for fuel-grade ethanol is significantly impacted by federal mandates for volumes of renewable fuels (such as ethanol) required to be blended with gasoline. Future demand for fuel-grade ethanol will largely depend on incentives to blend ethanol into motor fuels, including the price of ethanol relative to the price of gasoline, the relative octane value of ethanol, constraints on the ability of vehicles to use higher ethanol blends, and the Environmental Protection Agency's, or EPA's, established volumes from time to time, small refinery waivers, and other applicable environmental requirements.

The EPA has implemented the Renewable Fuel Standard under the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007. The EPA, in coordination with the Secretary of Energy and the Secretary of Agriculture, determines annual quotas for the quantity of renewable fuels (such as fuel-grade ethanol) that must be blended into motor fuels consumed in the United States. The EPA finalized, in July 2023, mandatory volumes of 15.25 billion and 15.0 billion gallons for 2023 and 2024, respectively, of conventional renewable fuel, or corn-based fuel-grade ethanol.

The EPA may issue small refinery waivers, in full or in part, to reduce or eliminate annual renewable fuel volume requirements for small refineries that process fewer than 75,000 barrels of petroleum daily.

Various bills in Congress introduced from time to time are also directed at altering existing renewable fuels energy legislation, but none have passed in recent years. Some legislative bills are directed at halting or reversing expansion of, or even eliminating, the renewable fuel program.

Our results of operations, cash flows and financial condition could be adversely impacted if the EPA reduces mandatory volumes or issues significant small refinery waivers, or if any legislation is enacted that reduces volume requirements.

Risks Related to Ownership of our Common Stock

Our stock price is highly volatile, which could result in substantial losses for investors purchasing shares of our common stock and in litigation against us.

The market price of our common stock has fluctuated significantly in the past and may continue to fluctuate significantly in the future. The market price of our common stock may continue to fluctuate in response to one or more of the following factors, or any of the other risks or uncertainties discussed in this report, many of which are beyond our control:

- fluctuations in the market prices of our products;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- the volume and timing of the receipt of orders for our products from major customers;
- competitive pricing pressures;
- anticipated trends in our financial condition and results of operations;
- changes in market valuations of companies similar to us;
- stock market price and volume fluctuations generally;
- regulatory developments or increased enforcement;
- fluctuations in our quarterly or annual operating results;
- additions or departures of key personnel;
- our ability to obtain any necessary financing;
- the timing, cost and results of our capital improvement projects;
- our financing activities and future sales of our common stock or other securities; and
- our ability to maintain contracts that are critical to our operations.

The price at which you purchase shares of our common stock may not be indicative of the price that will prevail in the trading market. You may be unable to sell your shares of common stock at or above your purchase price, which may result in substantial losses to you and which may include the complete loss of your investment. In the past, securities class action litigation has often been brought against a company following periods of high stock price volatility. We may be the target of similar litigation in the future. Securities litigation could result in substantial costs and divert management's attention and our resources away from our business.

Any of the risks described above could have a material adverse effect on our results of operations, the price of our common stock, or both.

Because we do not intend to pay any cash dividends on our shares of common stock in the near future, our stockholders will not be able to receive a return on their shares unless and until they sell them.

We intend to retain a significant portion of any future earnings to finance the development, operation and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the near future. The declaration, payment, and amount of any future dividends will be made at the discretion of our board of directors, and will depend upon, among other things, our results of operations, cash flows, and financial condition, operating and capital requirements, compliance with any applicable debt covenants, and other factors our board of directors considers relevant. There is no assurance that future dividends will be paid, and, if dividends are paid, there is no assurance of the amount of any such dividend. Unless our board of directors determines to pay dividends, our stockholders will be required to look solely to appreciation in the value of our common stock to realize any gain on their investment. There can be no assurance that any such appreciation will occur.

Our bylaws contain an exclusive forum provision that could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Delaware Court of Chancery shall be the sole and exclusive forum for (a) any derivative action or proceeding brought on our behalf, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of us to us or our stockholders, (c) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (d) any action asserting a claim governed by the internal affairs doctrine.

For the avoidance of doubt, the exclusive forum provision described above does not apply to any claims arising under the Securities Act of 1933, as amended, or the Securities Act, or the Securities Exchange Act of 1934, as amended, or the Exchange Act. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

The choice of forum provision in our bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. The applicable courts may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. With respect to the provision making the Delaware Court of Chancery the sole and exclusive forum for certain types of actions, stockholders who do bring a claim in the Delaware Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. Finally, if a court were to find this provision of our bylaws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could have a material adverse effect on us.

General Risk Factors

Cyberattacks through security vulnerabilities could lead to disruption of our business, reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.

Security vulnerabilities may arise from our hardware, software, employees, contractors or policies we have deployed, which may result in external parties gaining access to our networks, data centers, cloud data centers, corporate computers, manufacturing systems, and/or access to accounts we have at our suppliers, vendors or customers. External parties may gain access to our data or our customers' data, or attack the networks causing denial of service or attempt to hold our data or systems in ransom. The vulnerability could be caused by inadequate account security practices such as the failure to timely remove employee access when terminated. To mitigate these security issues, we have implemented measures throughout our organization, including firewalls, backups, encryption, employee information technology policies and user account policies. However, there can be no assurance that these measures will be sufficient to avoid cyberattacks. If any of these types of security breaches were to occur and we were unable to protect sensitive data, our relationships with our business partners and customers could be materially damaged, our reputation could be materially harmed, and we could be exposed to a risk of litigation and possible significant liability.

Further, if we fail to adequately maintain our information technology infrastructure, we may have outages and data loss. Excessive outages may affect our ability to timely and efficiently deliver products to customers or develop new products. Such disruptions and data loss may adversely impact our ability to fulfill orders and interrupt other processes. Delayed sales or lost customers resulting from these disruptions could adversely affect our financial results, stock price and reputation.

Our and our business partners' or contractors' failure to fully comply with applicable data privacy or similar laws could lead to significant fines and require onerous corrective action. In addition, data security breaches experienced by us or our business partners or contractors could result in the loss of trade secrets or other intellectual property, public disclosure of sensitive commercial data, and the exposure of personally identifiable information (including sensitive personal information) of our employees, customers, suppliers, contractors and others.

Unauthorized use or disclosure of, or access to, any personal information maintained by us or on our behalf, whether through breach of our systems, breach of the systems of our suppliers or vendors by an unauthorized party, or through employee or contractor error, theft or misuse, or otherwise, could harm our business. If any such unauthorized use or disclosure of, or access to, such personal information was to occur, our operations could be seriously disrupted, and we could be subject to demands, claims and litigation by private parties, and investigations, related actions, and penalties by regulatory authorities. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information. Finally, any perceived or actual unauthorized access to, or use or disclosure of, such information could harm our reputation, substantially impair our ability to attract and retain customers and have an adverse impact on our business, financial condition and results of operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

Unregistered Sales of Equity Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

We granted to certain employees shares of restricted stock under our 2016 Stock Incentive Plan pursuant to Restricted Stock Agreements dated and effective as of their respective grant dates by and between us and those employees.

We were obligated to withhold minimum withholding tax amounts with respect to vested shares of restricted stock and upon future vesting of shares of restricted stock granted to our employees. Each employee was entitled to pay the minimum withholding tax amounts to us in cash or to elect to have us withhold a vested amount of shares of restricted stock having a value equivalent to our minimum withholding tax requirements, thereby reducing the number of shares of vested restricted stock that the employee ultimately receives. If an employee failed to timely make such election, we automatically withheld the necessary shares of vested restricted stock.

For the three months ended June 30, 2023, in connection with satisfying our withholding requirements, we withheld the following number of shares of our common stock and remitted cash payments to cover the minimum withholding tax amounts, thereby effectively repurchasing from the employees such number of shares of our common stock at the following deemed purchase prices:

Month	Number of Shares Withheld	Deemed Purchase Price Per Share	Aggregate Purchase Price
April	81,141	$ 1.50	$ 121,712
May	—	$ —	$ —
June	—	$ —	$ —

The following table sets forth information about repurchases of our common stock for the three months ended June 30, 2023:

Period	Total number of shares purchased (1)	Average price paid per share	Total number of shares purchased as part of publicly-announced plans or programs (2)	Approximate dollar value of shares that may yet be purchased under plans or programs (2)(3)
April 1 to April 30, 2023	—	$ —	—	
May 1 to May 31, 2023	—	$ —	—	
June 1, to June 30, 2023	389,000	$ 2.57	389,000	
Three months ended June 30, 2023	389,000	$ 2.57	389,000	$ 45,992,000

(1) We repurchased 389,000 shares as part of our publicly announced share repurchase program during the three months ended June 30, 2023.

(2) On September 12, 2022, we announced a share repurchase program under which we may repurchase up to $50 million of our common stock with an initial purchase authorization of $10 million. Our lenders have further limited our purchase authorization to $5 million. Amounts in excess of our lenders' initial purchase authorization of $5 million will require additional lender consent and amounts in excess of the initial purchase authorization of $10 million will require additional board and preferred stockholder authorization. The share repurchase program does not have an expiration date, does not require the repurchase of any particular amount of shares, and may be implemented, modified, suspended or discontinued in whole or in part at any time and without further notice.

(3) Amount represents the share repurchase program size of $50 million less approximately $4.0 million in aggregate share repurchases, but is subject to authorizations for purchases in excess of our lenders' purchase authorization of $5 million and our board and preferred stockholders' initial purchase authorization of $10 million.

Dividends

Our current and future debt financing arrangements may limit or prevent cash distributions from our subsidiaries to us, depending upon the achievement of specified financial and other operating conditions and our ability to properly service our debt, thereby limiting or preventing us from paying cash dividends.

For the three and six months ended June 30, 2023 and 2022, we accrued and paid in cash an aggregate of $0.3 million and $0.6 million, respectively, in dividends on our Series B Cumulative Convertible Preferred Stock, or Series B Preferred Stock.

We have never declared or paid cash dividends on our common stock and do not currently intend to pay cash dividends on our common stock in the foreseeable future. We currently anticipate that we will retain any earnings for use in the continued development of our business.

The holders of our outstanding Series B Preferred Stock are entitled to dividends of 7% per annum, payable quarterly. Accrued and unpaid dividends in respect of our Series B Preferred Stock must be paid prior to the payment of any dividends in respect of shares of our common stock.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

ITEM 5. OTHER INFORMATION.

During the three months ended June 30, 2023, none of our directors or officers (as defined in Rule 16a-1(f) of the Securities Exchange Act of 1934, as amended) informed us of the adoption or termination of a Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K of the Securities Act of 1933, as amended).

ITEM 6. EXHIBITS.

Exhibit Number	Description
31.1	Certifications Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (*)
31.2	Certifications Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (*)
32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (*)
101.INS	Inline XBRL Instance Document (*)
101.SCH	Inline XBRL Taxonomy Extension Schema Document (*)
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document (*)
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document (*)
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document (*)
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document (*)
104	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101) (*)

(*) Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ALTO INGREDIENTS, INC.

Dated: August 8, 2023	By: /S/ ROBERT R. OLANDER
	Robert R. Olander
	Chief Financial Officer
	(Principal Financial and Accounting Officer)

EXHIBIT 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bryon T. McGregor, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alto Ingredients, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2023

/S/ BRYON T. MCGREGOR
Bryon T. McGregor
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Robert R. Olander, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alto Ingredients, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: August 8, 2023

/S/ ROBERT R. OLANDER
Robert R. Olander
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION OF
CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Alto Ingredients, Inc. (the "Company") for the period ended June 30, 2023 (the "Report"), the undersigned hereby certify in their capacities as Chief Executive Officer and Chief Financial Officer of the Company, respectively, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 8, 2023	By: /S/ BRYON T. MCGREGOR Bryon T. McGregor President and Chief Executive Officer (Principal Executive Officer)
Dated: August 8, 2023	By: /S/ ROBERT R. OLANDER Robert R. Olander Chief Financial Officer (Principal Financial Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signatures that appear in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.