Green Plains Inc.
Form 10-Q
November 09, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

_____

FORM 10-Q

Quarterly Report Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

For the Quarterly Period Ended September 30, 2018

Commission File Number 001-32924

Green Plains Inc.

(Exact name of registrant as specified in its charter)

Iowa (State or other jurisdiction of incorporation or organization)	84-1652107 (I.R.S. Employer Identification No.)
1811 Aksarben Drive, Omaha, NE 68106 (Address of principal executive offices, including zip code)	(402) 884-8700 (Registrant’s telephone number, including area code)

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

The number of shares of common stock, par value $0.001 per share, outstanding as of November 5, 2018, was 41,414,396 shares.

TABLE OF CONTENTS

		Page
	Commonly Used Defined Terms	2
PART I – FINANCIAL INFORMATION		
Item 1.	Financial Statements	
	Consolidated Balance Sheets	3
	Consolidated Statements of Operations	4
	Consolidated Statements of Comprehensive Income	5
	Consolidated Statements of Cash Flows	6
	Notes to Consolidated Financial Statements	8
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	35
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	49
Item 4.	Controls and Procedures	51
PART II – OTHER INFORMATION		
Item 1.	Legal Proceedings	53
Item 1A.	Risk Factors	53
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds	54
Item 3.	Defaults Upon Senior Securities	54
Item 4.	Mine Safety Disclosures	55
Item 5.	Other Information	55
Item 6.	Exhibits	56
	Signatures	57

1

Commonly Used Defined Terms

The abbreviations, acronyms and industry terminology used in this quarterly report are defined as follows:

Green Plains Inc., Subsidiaries, and Partners:

Green Plains; the company	Green Plains Inc. and its subsidiaries
BioProcess Algae	BioProcess Algae LLC
DKGP	DKGP Energy Terminals LLC
Fleischmann’s Vinegar	Fleischmann’s Vinegar Company, Inc.
Green Plains Cattle	Green Plains Cattle Company LLC
Green Plains Grain	Green Plains Grain Company LLC
Green Plains Partners; the partnership	Green Plains Partners LP
Green Plains Processing	Green Plains Processing LLC and its subsidiaries
Green Plains Trade	Green Plains Trade Group LLC
Green Plains Commodity Management	Green Plains Commodity Management LLC

Accounting Defined Terms:

AMT	Alternative minimum tax
ASC	Accounting Standards Codification
EBITDA	Earnings before interest, income taxes, depreciation and amortization
EPS	Earnings per share
Exchange Act	Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
GAAP	U.S. Generally Accepted Accounting Principles
LIBOR	London Interbank Offered Rate
LTIP	Long-Term Incentive Plan
R&D Credits	Research and development tax credits
SEC	Securities and Exchange Commission

Other Defined Terms:

CAFE	Corporate Average Fuel Economy
D.C.	District of Columbia
E10	Gasoline blended with up to 10% ethanol by volume
E15	Gasoline blended with up to 15% ethanol by volume
E85	Gasoline blended with up to 85% ethanol by volume
EIA	U.S. Energy Information Administration
EISA	Energy Independence and Security Act of 2017, as amended
EPA	U.S. Environmental Protection Agency
MmBtu	Million British Thermal Units
Mmg	Million gallons
MTBE	Methyl tertiary-butyl ether
RBOB	Reformulated blendstock for oxygenate blending
RFS II	Renewable Fuels Standard II
RIN	Renewable identification number
RVO	Renewable volume obligation
U.S.	United States
USDA	U.S. Department of Agriculture

PART 1 – FINANCIAL INFORMATION

Item 1. Financial Statements.

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(in thousands, except share amounts)

	September 30, 2018 (unaudited)	December 31, 2017
ASSETS		
Current assets		
Cash and cash equivalents	$ 171,674	$ 266,651
Restricted cash	62,797	45,709
Accounts receivable, net of allowances of $206 and $217, respectively	134,950	151,122
Income taxes receivable	13,211	6,413
Inventories	765,198	711,878
Prepaid expenses and other	15,529	17,808
Derivative financial instruments	24,254	6,890
Total current assets	1,187,613	1,206,471
Property and equipment, net of accumulated depreciation and amortization of $588,336 and $514,585, respectively	1,143,551	1,176,707
Goodwill	182,879	182,879
Other assets	170,791	218,593
Total assets	$ 2,684,834	$ 2,784,650
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 155,663	$ 205,479
Accrued and other liabilities	47,955	63,886
Derivative financial instruments	41,725	12,884
Income taxes payable	-	9,909

Short-term notes payable and other borrowings	556,566	526,180
Current maturities of long-term debt	65,614	67,923
Total current liabilities	867,523	886,261
Long-term debt	767,177	767,396
Deferred income taxes	21,764	56,801
Other liabilities	14,235	15,056
Total liabilities	1,670,699	1,725,514
Commitments and contingencies (Note 14)		
Stockholders' equity		
Common stock, $0.001 par value; 75,000,000 shares authorized; 46,746,346 and 46,410,405 shares issued, and 41,420,454 and 41,084,463 shares outstanding, respectively	47	46
Additional paid-in capital	695,143	685,019
Retained earnings	276,082	325,411
Accumulated other comprehensive loss	(17,176)	(13,110)
Treasury stock, 5,325,892 and 5,325,942 shares, respectively	(55,183)	(55,184)
Total Green Plains stockholders' equity	898,913	942,182
Noncontrolling interests	115,222	116,954
Total stockholders' equity	1,014,135	1,059,136
Total liabilities and stockholders' equity	$ 2,684,834	$ 2,784,650

See accompanying notes to the consolidated financial statements.

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

(unaudited and in thousands, except per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenues				
Product revenues	$ 998,802	$ 899,534	$ 3,027,678	$ 2,670,458
Service revenues	1,298	1,701	4,546	4,724
Total revenues	1,000,100	901,235	3,032,224	2,675,182
Costs and expenses				
Cost of goods sold (excluding depreciation and amortization expenses reflected below)	936,384	815,787	2,835,344	2,457,702
Operations and maintenance expenses	7,271	8,309	23,564	25,107
Selling, general and administrative expenses	25,083	28,589	80,817	77,946
Depreciation and amortization expenses	30,713	27,834	84,010	80,105
Total costs and expenses	999,451	880,519	3,023,735	2,640,860
Operating income	649	20,716	8,489	34,322
Other income (expense)				
Interest income	790	383	2,136	1,061
Interest expense	(23,399)	(31,889)	(67,548)	(69,815)
Other, net	(117)	1,444	2,362	2,811
Total other expense	(22,726)	(30,062)	(63,050)	(65,943)
Loss before income taxes	(22,077)	(9,346)	(54,561)	(31,621)
Income tax benefit	14,658	48,775	31,438	60,905
Net income (loss)	(7,419)	39,429	(23,123)	29,284
Net income attributable to noncontrolling interests	5,050	5,035	14,457	14,853
Net income (loss) attributable to Green Plains	$ (12,469)	$ 34,394	$ (37,580)	$ 14,431
Earnings per share:				
Net income (loss) attributable to Green Plains - basic	$ (0.31)	$ 0.83	$ (0.94)	$ 0.36
Net income (loss) attributable to Green Plains - diluted	$ (0.31)	$ 0.74	$ (0.94)	$ 0.48
Weighted average shares outstanding:				

Basic	40,229	41,348	40,189	40,008
Diluted	40,229	50,647	40,189	50,693
Cash dividend declared per share	$ 0.12	$ 0.12	$ 0.36	$ 0.36

See accompanying notes to the consolidated financial statements.

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(unaudited and in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income (loss)	$ (7,419)	$ 39,429	$ (23,123)	$ 29,284
Other comprehensive income (loss), net of tax:				
Unrealized losses on derivatives arising during the period, net of tax benefit of $4,314, $4,575, $343 and $5,633, respectively	(14,395)	(7,660)	(1,522)	(9,436)
Reclassification of realized losses (gains) on derivatives, net of tax expense (benefit) of ($420), ($2,650), ($55) and $21, respectively	1,427	4,453	243	(34)
Total other comprehensive loss, net of tax	(12,968)	(3,207)	(1,279)	(9,470)
Comprehensive income (loss)	(20,387)	36,222	(24,402)	19,814
Comprehensive income attributable to noncontrolling interests	5,050	5,035	14,457	14,853
Comprehensive income (loss) attributable to Green Plains	$ (25,437)	$ 31,187	$ (38,859)	$ 4,961

See accompanying notes to the consolidated financial statements.

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited and in thousands)

	Nine Months Ended September 30,	
	2018	2017
Cash flows from operating activities:		
Net income (loss)	$ (23,123)	$ 29,284
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	84,010	80,105
Amortization of debt issuance costs and debt discount	11,343	11,222
Loss on exchange of 3.25% convertible notes due 2018	-	1,291
Gain on disposal of assets	(2,743)	(2,439)
Write-off of deferred financing fees related to extinguishment of debt	-	9,460
Deferred income taxes	(37,980)	(88,565)
Other noncurrent assets and liabilities	-	18,062
Stock-based compensation	8,726	8,761
Undistributed equity loss of affiliates	489	120
Changes in operating assets and liabilities before effects of business combinations:		
Accounts receivable	18,069	32,267
Inventories	53,363	(168,788)
Derivative financial instruments	9,843	(12,738)
Prepaid expenses and other assets	2,184	2,180
Accounts payable and accrued liabilities	(68,520)	(34,278)
Current income taxes	31,220	(1,540)
Other	(2,493)	1,361
Net cash provided by (used in) operating activities	84,388	(114,235)
Cash flows from investing activities:		
Purchases of property and equipment, net	(31,114)	(36,475)
Acquisition of businesses, net of cash acquired	(124,407)	(61,727)
Investments in unconsolidated subsidiaries	(2,446)	(12,033)
Other investing activities	7,500	-
Net cash used in investing activities	(150,467)	(110,235)
Cash flows from financing activities:		

Proceeds from the issuance of long-term debt	58,700	551,500
Payments of principal on long-term debt	(62,537)	(487,450)
Proceeds from short-term borrowings	3,095,927	3,301,630
Payments on short-term borrowings	(3,065,953)	(3,135,347)
Cash payment for exchange of 3.25% convertible notes due 2018	-	(8,523)
Payments for repurchase of common stock	-	(5,733)
Payments of cash dividends and distributions	(30,921)	(29,267)
Payment penalty on early extinguishment of debt	-	(2,881)
Payments of loan fees	(3,961)	(15,541)
Payments related to tax withholdings for stock-based compensation	(3,215)	(4,105)
Proceeds from exercise of stock options	150	50
Net cash provided by (used in) financing activities	(11,810)	164,333
Net change in cash, cash equivalents and restricted cash	(77,889)	(60,137)
Cash, cash equivalents and restricted cash, beginning of period	312,360	406,791
Cash, cash equivalents and restricted cash, end of period	$ 234,471	$ 346,654

Continued on the following page

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited and in thousands)

Continued from the previous page

	Nine Months Ended September 30,	
	2018	2017
Reconciliation of total cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 171,674	$ 261,588
Restricted cash	62,797	85,066
Total cash, cash equivalents and restricted cash	$ 234,471	$ 346,654
Non-cash financing activity:		
Modification of 3.25% convertible notes due 2019	$ 4,660	$ -
Exchange of 3.25% convertible notes due 2018 for shares of common stock	$ -	$ 47,743
Exchange of common stock held in treasury stock for 3.25% convertible notes due 2018	$ 1	$ 27,356
Supplemental investing and financing activities:		
Assets acquired in acquisitions, net of cash	$ 124,525	$ 62,209
Less: liabilities assumed	(118)	(482)
Net assets acquired	$ 124,407	$ 61,727
Supplemental disclosures of cash flow:		
Cash paid (received) for income taxes	$ (23,568)	$ 2,062
Cash paid for interest	$ 58,297	$ 39,984

See accompanying notes to the consolidated financial statements.

GREEN PLAINS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(unaudited)

1. BASIS OF PRESENTATION, DESCRIPTION OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

References to the Company

References to "Green Plains" or the "company" in the consolidated financial statements and in these notes to the consolidated financial statements refer to Green Plains Inc., an Iowa corporation, and its subsidiaries.

Consolidated Financial Statements

The consolidated financial statements include the company's accounts and all significant intercompany balances and transactions are eliminated. Unconsolidated entities are included in the financial statements on an equity basis. As of September 30, 2018, the company owns a 62.4% limited partner interest and a 2.0% general partner interest in Green Plains Partners LP. Public investors own the remaining 35.6% limited partner interest in the partnership. The company determined that the limited partners in the partnership with equity at risk lack the power, through voting rights or similar rights, to direct the activities that most significantly impact partnership's economic performance; therefore, the partnership is considered a variable interest entity. The company, through its ownership of the general partner interest in the partnership, has the power to direct the activities that most significantly affect economic performance and is obligated to absorb losses and has the right to receive benefits that could be significant to the partnership. Therefore, the company is considered the primary beneficiary and consolidates the partnership in the company's financial statements. The assets of the partnership cannot be used by the company for general corporate purposes. The partnership's consolidated total assets as of September 30, 2018, and December 31, 2017, excluding intercompany balances, were $71.5 million and $74.9 million, respectively, and primarily consisted of property and equipment and goodwill. The partnership's consolidated total liabilities as of September 30, 2018, and December 31, 2017, excluding intercompany balances, were $152.7 million and $153.0 million, respectively, which primarily consisted of long-term debt as discussed in Note 9 – Debt. The liabilities recognized as a result of consolidating the partnership do not represent additional claims on our general assets. The company also owns a 90.0% interest in BioProcess Algae, a joint venture formed in 2008, and consolidates their results in its consolidated financial statements.

The accompanying unaudited consolidated financial statements are prepared in accordance with GAAP for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. Because they do not include all of the information and notes required by GAAP, the consolidated financial statements should be read in conjunction with the company's annual report on Form 10-K for the year ended December 31, 2017.

The unaudited financial information reflects adjustments which are, in the opinion of management, necessary for a fair presentation of results of operations, financial position and cash flows for the periods presented. The adjustments are normal and recurring in nature, unless otherwise noted. Interim period results are not necessarily indicative of the results to be expected for the entire year.

Reclassifications

Certain prior year amounts were reclassified to conform to the current year presentation. These reclassifications did not affect total revenues, costs and expenses, net income (loss) or stockholders' equity.

Use of Estimates in the Preparation of Consolidated Financial Statements

The preparation of consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. The company bases its estimates on historical experience and assumptions it believes are proper and reasonable under the circumstances and regularly evaluates the appropriateness of its estimates and assumptions. Actual results could differ from those estimates. Key accounting policies, including but not limited to those relating to revenue recognition, depreciation of property and equipment, carrying value of intangible assets, impairment of long-lived assets and goodwill, derivative financial instruments, accounting for income taxes and assets acquired and liabilities assumed in acquisitions, are impacted significantly by judgments, assumptions and estimates used in the preparation of the consolidated financial statements.

Description of Business

The company operates within four business segments: (1) ethanol production, which includes the production of ethanol and distillers grains, and recovery of corn oil, (2) agribusiness and energy services, which includes grain handling and storage, commodity marketing and merchant trading for company-produced and third-party ethanol, distillers grains, corn oil, natural gas and other commodities, (3) food and ingredients, which includes cattle feeding, vinegar production and food-grade corn oil operations and (4) partnership, which includes fuel storage and transportation services.

Cash and Cash Equivalents

Cash and cash equivalents includes bank deposits as well as short-term, highly liquid investments with original maturities of three months or less.

Restricted Cash

The company has restricted cash, which can only be used for funding letters of credit or for payment towards a revolving credit agreement. Restricted cash also includes cash margins and securities pledged to commodity exchange clearinghouses. To the degree these segregated balances are cash and cash equivalents, they are considered restricted cash on the consolidated statements of cash flows.

Revenue Recognition

The company recognizes revenue at the point in time when the product or service is transferred to the customer.

Sales of ethanol, distillers grains, corn oil, natural gas and other commodities by the company’s marketing business are recognized when obligations under the terms of a contract with a customer are satisfied. Generally, this occurs with the transfer of control of products or services. Revenues related to marketing for third parties are presented on a gross basis as the company controls the product prior to the sale to the end customer, takes title of the product and has inventory risk. Unearned revenue is recorded for goods in transit when the company has received payment but control has not yet been transferred to the customer. Revenues for receiving, storing, transferring and transporting ethanol and

other fuels are recognized when the product is delivered to the customer.

The company routinely enters into physical-delivery energy commodity purchase and sale agreements. At times, the company settles these transactions by transferring its obligations to other counterparties rather than delivering the physical commodity. Energy trading transactions are reported net as a component of revenue. All other transactions are reported net as either a component of revenue or cost of goods sold, depending on their position as a gain or loss. Revenues also include realized gains and losses on related derivative financial instruments and reclassifications of realized gains and losses on cash flow hedges from accumulated other comprehensive income or loss.

Sales of products, including agricultural commodities, cattle and vinegar, are recognized when control of the product is transferred to the customer, which depends on the agreed upon shipment or delivery terms. Revenues related to grain merchandising are presented gross and include shipping and handling, which is also a component of cost of goods sold. Revenues from grain storage are recognized when services are rendered.

A substantial portion of the partnership revenues are derived from fixed-fee commercial agreements for storage, terminal or transportation services. The partnership recognizes revenue upon transfer of control of product from its storage tanks and fuel terminals, when railcar volumetric capacity is provided, and as truck transportation services are performed.

Shipping and Handling Costs

We account for shipping and handling activities related to contracts with customers as costs to fulfill our promise to transfer the associated products. Accordingly, we record customer payments associated with shipping and handling costs as a component of revenue, and classify such costs as a component of cost of goods sold.

Cost of Goods Sold

Cost of goods sold includes direct labor, materials, shipping and plant overhead costs. Direct labor includes all compensation and related benefits of non-management personnel involved in ethanol and vinegar production, and cattle feeding operations. Grain purchasing and receiving costs, excluding labor costs for grain buyers and scale operators, are also

included in cost of goods sold. Materials include the cost of corn feedstock, denaturant, process chemicals, cattle and veterinary supplies. Corn feedstock costs include gains and losses on related derivative financial instruments not designated as cash flow hedges, inbound freight charges, inspection costs and transfer costs, as well as reclassifications of gains and losses on cash flow hedges from accumulated other comprehensive income or loss. Plant overhead consists primarily of plant and feedlot utilities, repairs and maintenance, feedlot expenses and outbound freight charges. Shipping costs incurred by the company, including railcar costs, are also reflected in cost of goods sold.

The company uses exchange-traded futures and options contracts and forward purchase and sales contracts to attempt to minimize the effect of price changes on ethanol, grain, natural gas and cattle inventories. Exchange-traded futures and options contracts are valued at quoted market prices and settled predominantly in cash. The company is exposed to loss when counterparties default on forward purchase and sale contracts. Grain inventories held for sale and forward purchase and sale contracts are valued at market prices when available or other market quotes adjusted for differences, primarily in transportation, between the exchange-traded market and local market where the terms of the contract is based. Changes in forward purchase contracts and exchange-traded futures and options contracts are recognized as a component of cost of goods sold.

Operations and Maintenance Expenses

In the partnership segment, transportation expenses represent the primary component of operations and maintenance expenses. Transportation expenses include railcar leases, freight and shipping of the company’s ethanol and co-products, as well as costs incurred storing ethanol at destination terminals.

Derivative Financial Instruments

The company uses various derivative financial instruments, including exchange-traded futures and exchange-traded and over-the-counter options contracts, to attempt to minimize risk and the effect of commodity price changes including but not limited to, corn, ethanol, cattle, natural gas and crude oil. The company monitors and manages this exposure as part of its overall risk management policy to reduce the adverse effect market volatility may have on its operating results. The company may hedge these commodities as one way to mitigate risk; however, there may be situations when these hedging activities themselves result in losses.

By using derivatives to hedge exposures to changes in commodity prices, the company is exposed to credit and market risk. The company’s exposure to credit risk includes the counterparty’s failure to fulfill its performance obligations under the terms of the derivative contract. The company minimizes its credit risk by entering into transactions with high quality counterparties, limiting the amount of financial exposure it has with each counterparty and monitoring their financial condition. Market risk is the risk that the value of the financial instrument might be adversely affected

by a change in commodity prices or interest rates. The company manages market risk by incorporating parameters to monitor exposure within its risk management strategy, which limits the types of derivative instruments and strategies the company can use and the degree of market risk it can take using derivative instruments.

The company evaluates its physical delivery contracts to determine if they qualify for normal purchase or sale exemptions which are expected to be used or sold over a reasonable period in the normal course of business. Contracts that do not meet the normal purchase or sale criteria are recorded at fair value. Changes in fair value are recorded in operating income unless the contracts qualify for, and the company elects, cash flow hedge accounting treatment.

Certain qualifying derivatives related to ethanol production, agribusiness and energy services, and food and ingredients segments are designated as cash flow hedges. The company evaluates the derivative instrument to ascertain its effectiveness prior to entering into cash flow hedges. Unrealized gains and losses are reflected in accumulated other comprehensive income or loss until the gain or loss from the underlying hedged transaction is realized. When it becomes probable a forecasted transaction will not occur, the cash flow hedge treatment is discontinued, which affects earnings. These derivative financial instruments are recognized in current assets or other current liabilities at fair value.

At times, the company hedges its exposure to changes in inventory values and designates qualifying derivatives as fair value hedges. The carrying amount of the hedged inventory is adjusted in the current period for changes in fair value. Ineffectiveness of the hedges is recognized in the current period to the extent the change in fair value of the inventory is not offset by the change in fair value of the derivative.

Recent Accounting Pronouncements

Effective January 1, 2018, the company adopted the amended guidance in ASC Topic 606, Revenue from Contracts with Customers. Please refer to Note 2 – Revenue for further details.

Effective January 1, 2018, the company adopted the amended guidance in ASC Topic 230, Statement of Cash Flows: Restricted Cash, which requires amounts generally described as restricted cash and restricted cash equivalents to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The amended guidance was applied retrospectively. As a result, net cash used in operating activities for the nine months ended September 30, 2017, was adjusted to exclude the change in restricted cash and decreased the previously reported balance by $8.0 million. Net cash provided by financing activities for the nine months ended September 30, 2017, was adjusted to exclude the change in restricted cash and decreased the previously reported balance by $25.5 million.

Effective January 1, 2018, the company adopted the amended guidance in ASC Topic 740, Income Taxes: Intra-Entity Transfers of Assets other than Inventory, which requires the recognition of current and deferred income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amended guidance is required on a modified retrospective basis, with a cumulative-effect adjustment to retained earnings as of the beginning of the year of adoption. The adoption of the guidance did not have an impact to the financial statements.

Effective January 1, 2018, the company adopted the amended guidance in ASC Topic 805, Business Combinations: Clarifying the Definition of a Business, which clarifies the definition of a business and provides guidance to assist companies and other reporting organizations evaluate whether transactions should be accounted for as acquisitions or disposals of assets or businesses. The amended guidance will be applied prospectively.

Effective January 1, 2018, the company early adopted the amended guidance in ASC Topic 350, Intangibles – Goodwill and Other: Simplifying the Test for Goodwill Impairment, which simplifies the measurement of goodwill by eliminating Step 2 from the goodwill impairment test. The annual goodwill impairment test will be performed by comparing the fair value of a reporting unit with its carrying amount. An impairment charge equal to the amount by which the carrying amount exceeds the reporting unit’s fair value, not to exceed the total amount of goodwill allocated to that reporting unit, would be recognized. The amended guidance will be applied prospectively, and used when the annual impairment test is performed in the current year. The company does not believe the new guidance will have a material impact on the consolidated financial statements.

Effective January 1, 2018, the company early adopted the amended guidance in ASC Topic 220, Income Statement – Reporting Comprehensive Income: Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income, which allows a reclassification from accumulated other comprehensive income to retained earnings for

stranded tax effects resulting from the Tax Cuts and Jobs Act. The amendment eliminates the stranded tax effects resulting from the Tax Cuts and Jobs Act and is intended to improve the usefulness of information reported. As a result, the company recorded a $2.8 million reclassification from accumulated other comprehensive income to retained earnings during the first quarter of 2018. It is the company's policy to release income tax effects from accumulated other comprehensive income using the portfolio approach.

Effective January 1, 2019, the company will adopt the amended guidance in ASC Topic 842, Leases, which aims to make leasing activities more transparent and comparable, requiring substantially all leases to be recognized by lessees on the balance sheet as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases. The new standard is effective for fiscal years and interim periods within those years, beginning after December 15, 2018. The standard requires a modified retrospective transition approach and allows for early adoption. In July 2018, the FASB issued Accounting Standards Update, Leases (Topic 842): Targeted Improvements, which provides an option to apply the transition provisions of the new standard at adoption date instead of the earliest comparative period presented in the financial statements. The company will elect to use this optional transition method.

The company has established an implementation team which continues to review current accounting policies, internal controls, processes, and disclosures that will change as a result of adopting the new standard. The company has gathered information on existing leases to obtain a complete population of leases upon adoption, and has implemented a lease accounting system, which will assist in delivering the required accounting changes and disclosures. The new standard will significantly increase right-of-use assets and lease liabilities on the company's consolidated balance sheet, primarily due to operating leases that are currently not recognized on the balance sheet. In addition, it will also require expanded disclosures

in the company's consolidated financial statements. The company will complete its assessment of the impact of the new guidance on its consolidated financial statements during the fourth quarter of 2018.

2. REVENUE

Adoption of ASC Topic 606

On January 1, 2018, the company adopted the amended guidance in ASC Topic 606, Revenue from Contracts with Customers, and all related amendments ("new revenue standard") and applied it to all contracts using the modified retrospective transition method. There were no adjustments to the consolidated January 1, 2018 balance sheet for the adoption of the new revenue standard. As such, comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. In addition, there was no impact of adoption on the consolidated statements of operations or balance sheets for the nine months ended September 30, 2018.

Revenue Recognition

Revenue is recognized when obligations under the terms of a contract with a customer are satisfied. Generally this occurs with the transfer of control of products or services. Revenue is measured as the amount of consideration expected to be received in exchange for transferring goods or providing services. Sales, value add, and other taxes the company collects concurrent with revenue-producing activities are excluded from revenue.

Revenue by Source

The following table disaggregates revenue by major source for the three and nine months ended September 30, 2018 (in thousands):

	Three Months Ended September 30, 2018					
	Ethanol Production	Agribusiness & Energy Services	Food & Ingredients	Partnership	Eliminations	Total
Revenues:						
Revenues from contracts with customers under ASC Topic 606:						
Ethanol	$ 291	$ -	$ -	$ -	$ -	$ 291

Distillers grains	54,687	-	-	-	-	54,687
Cattle and vinegar	-	-	259,224	-	-	259,224
Service revenues	-	-	-	983	-	983
Other	238	680	-	-	-	918
Intersegment revenues	721	23	38	2,597	(3,379)	-
Total revenues from contracts with customers	55,937	703	259,262	3,580	(3,379)	316,103
Revenues from contracts accounted for as derivatives under ASC Topic 815 (1):						
Ethanol	440,333	93,166	-	-	-	533,499
Distillers grains	56,802	44,142	-	-	-	100,944
Corn oil	17,088	10,275	4,411	-	-	31,774
Grain	30	21,972	-	-	-	22,002
Cattle and vinegar	-	-	(12,522)	-	-	(12,522)
Other	3,930	4,055	-	-	-	7,985
Intersegment revenues	2,392	12,669	-	-	(15,061)	-
Total revenues from contracts accounted for as derivatives	520,575	186,279	(8,111)	-	(15,061)	683,682
Leasing revenues under ASC Topic 840 (2)	-	-	-	22,190	(21,875)	315
Total Revenues	$ 576,512	$ 186,982	$ 251,151	$ 25,770	$ (40,315)	$ 1,000,100

	Nine Months Ended September 30, 2018					
	Ethanol Production	Agribusiness & Energy Services	Food & Ingredients	Partnership	Eliminations	Total
Revenues:						
Revenues from contracts with customers under ASC 606:						
Ethanol	$ 3,391	$ -	$ -	$ -	$ -	$ 3,391
Distillers grains	174,589	-	-	-	-	174,589
Cattle and vinegar	-	-	748,699	-	-	748,699
Service revenues	-	-	-	3,430	-	3,430
Other	1,570	2,012	-	-	-	3,582
Intersegment revenues	2,258	23	118	7,286	(9,685)	-
Total revenues from contracts with customers	181,808	2,035	748,817	10,716	(9,685)	933,691
Revenues from contracts accounted for as derivatives under ASC Topic 815 (1):						
Ethanol	1,333,989	321,824	-	-	-	1,655,813
Distillers grains	147,203	98,060	-	-	-	245,263
Corn oil	52,690	22,433	12,048	-	-	87,171
Grain	500	59,101	-	-	-	59,601
Cattle and vinegar	-	-	(5,638)	-	-	(5,638)
Other	12,486	42,721	-	-	-	55,207
Intersegment revenues	7,027	38,226	-	-	(45,253)	-
Total revenues from contracts accounted for as derivatives	1,553,895	582,365	6,410	-	(45,253)	2,097,417
Leasing revenues under ASC 840 (2)	-	-	-	66,779	(65,663)	1,116
Total Revenues	$ 1,735,703	$ 584,400	$ 755,227	$ 77,495	$ (120,601)	$ 3,032,224

(1) Revenues from contracts accounted for as derivatives represent physically settled derivative sales that are outside the scope of ASC Topic 606, Revenue from Contracts with Customers (ASC Topic 606), where the company recognizes revenue when control of the inventory is transferred within the meaning of ASC Topic 606 as required by ASC Topic 610-20, Gains and Losses from the Derecognition of Nonfinancial Assets.

(2) Leasing revenues do not represent revenues recognized from contracts with customers under ASC Topic 606, and continue to be accounted for under ASC Topic 840, Leases.

Payment Terms

The company has standard payment terms, which vary depending upon the nature of the services provided, with the majority falling within 10 to 30 days after transfer of control or completion of services. In instances where the timing of revenue recognition differs from the timing of invoicing, the company has determined that contracts generally do not include a significant financing component.

Contract Liabilities

The company records unearned revenue when consideration is received, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of service and lease agreements. Unearned revenue from service agreements, which represents a contract liability, is recorded for fees that have been charged to the customer prior to the completion of performance obligations, and is generally recognized in the subsequent quarter. The company expects to recognize all of the unearned revenue associated with service agreements as of September 30, 2018, in the subsequent quarter when the inventory is withdrawn from the partnership’s tank storage.

Practical Expedients

Under the new revenue standard, companies may elect various practical expedients upon adoption. As a result, the company elected to recognize the cost for shipping and handling activities that occur after the customer obtains control of the promised goods as fulfillment activities and not when performance obligations are met. The company also elected to exclude sales taxes from transaction prices.

3. ACQUISITIONS

Acquisition of Cattle Feeding Operations – Bartlett Cattle Company, L.P.

On August 1, 2018, the company acquired two cattle-feeding operations from Bartlett Cattle Company, L.P. for $16.2 million, plus working capital of approximately $106.6 million primarily consisting of work-in-process inventory. The transaction included the feed yards located in Sublette, Kansas and Tulia, Texas, which added combined feedlot capacity of 97,000 head of cattle to the company's operations. The transaction was financed using cash on hand and proceeds from the Green Plains Cattle senior secured asset-based revolving credit facility. There were no material acquisition costs recorded for the acquisition.

The following is a summary of the preliminary purchase price of assets acquired and liabilities assumed (in thousands):

Amounts of Identifiable Assets Acquired and Liabilities Assumed	
Accounts receivable	$ 1,897
Inventory	104,809
Property and equipment, net	16,190
Current liabilities	(118)
Total identifiable net assets	$ 122,778

The amounts above reflect a working capital payment by the company of $0.9 million made during the third quarter of 2018.

Acquisition of Cattle Feeding Operations – Cargill Cattle Feeders, LLC

On May 16, 2017, the company acquired two cattle-feeding operations from Cargill Cattle Feeders, LLC for $59.3 million, including certain working capital adjustments. The transaction included the feed yards located in Leoti, Kansas and Eckley, Colorado, which added combined feedlot capacity of 155,000 head of cattle to the company's operations. The transaction was financed using cash on hand. There were no material acquisition costs recorded for the acquisition.

As part of the transaction, the company also entered into a long-term cattle supply agreement with Cargill Meat Solutions Corporation. Under the cattle supply agreement, all cattle placed in the Leoti and Eckley feedlots are sold exclusively to Cargill Meat Solutions under an agreed upon pricing arrangement.

The following is a summary of the assets acquired and liabilities assumed (in thousands):

Amounts of Identifiable Assets Acquired and Liabilities Assumed	
Inventory	$ 22,450
Prepaid expenses and other	52
Property and equipment, net	36,960
Current liabilities	(180)
Total identifiable net assets	$ 59,282

The amounts above reflect the final purchase price allocation, which included working capital true-up payments by the company of $1.6 million made during the first half of 2018.

14

4. FAIR VALUE DISCLOSURES

The following methods, assumptions and valuation techniques were used in estimating the fair value of the company's financial instruments:

Level 1 – unadjusted quoted prices in active markets for identical assets or liabilities the company can access at the measurement date.

Level 2 – directly or indirectly observable inputs such as quoted prices for similar assets or liabilities in active markets other than quoted prices included within Level 1, quoted prices for identical or similar assets in markets that are not active, and other inputs that are observable or can be substantially corroborated by observable market data through correlation or other means. Grain inventories held for sale in the agribusiness and energy services segment are valued at nearby futures values, plus or minus nearby basis.

Level 3 – unobservable inputs that are supported by little or no market activity and comprise a significant component of the fair value of the assets or liabilities. The company currently does not have any recurring Level 3 financial instruments.

Derivative contracts include exchange-traded commodity futures and options contracts and forward commodity purchase and sale contracts. Exchange-traded futures and options contracts are valued based on unadjusted quoted prices in active markets and are classified in Level 1. The majority of the company's exchange-traded futures and options contracts are cash-settled on a daily basis.

There have been no changes in valuation techniques and inputs used in measuring fair value. The company's assets and liabilities by level are as follows (in thousands):

	Fair Value Measurements at September 30, 2018	
	Quoted Prices in	Significant Other Observable Inputs

	Active Markets for Identical Assets (Level 1)	(Level 2)	Total
Assets:			
Cash and cash equivalents	$ 171,674	$ -	$ 171,674
Restricted cash	62,797	-	62,797
Inventories carried at market	-	81,141	81,141
Unrealized gains on derivatives	-	12,878	12,878
Other assets	114	1	115
Total assets measured at fair value	$ 234,585	$ 94,020	$ 328,605
Liabilities:			
Accounts payable (1)	$ -	$ 15,602	$ 15,602
Unrealized losses on derivatives	-	18,472	18,472
Other	-	25	25
Total liabilities measured at fair value	$ -	$ 34,099	$ 34,099

	Fair Value Measurements at December 31, 2017		
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Total
Assets:			
Cash and cash equivalents	$ 266,651	$ -	$ 266,651
Restricted cash	45,709	-	45,709
Inventories carried at market	-	26,834	26,834
Unrealized gains on derivatives	-	12,045	12,045
Other assets	115	-	115
Total assets measured at fair value	$ 312,475	$ 38,879	$ 351,354
Liabilities:			
Accounts payable (1)	$ -	$ 37,401	$ 37,401
Unrealized losses on derivatives	-	12,884	12,884
Other liabilities	-	92	92
Total liabilities measured at fair value	$ -	$ 50,377	$ 50,377

(1) Accounts payable is generally stated at historical amounts with the exception of $15.6 million and $37.4 million at September 30, 2018, and December 31, 2017, respectively, related to certain delivered inventory for which the payable fluctuates based on changes in commodity prices. These payables are hybrid financial instruments for which the company has elected the fair value option.

The company believes the fair value of its debt approximated book value, which was $1.4 billion at September 30, 2018. The company estimated the fair value of its outstanding debt using Level 2 inputs. The company believes the fair value of its accounts receivable approximated book value, which was $135.0 million and $151.1 million at September 30, 2018, and December 31, 2017, respectively.

Although the company currently does not have any recurring Level 3 financial measurements, the fair values of tangible assets and goodwill acquired and the equity component of convertible debt issued represent Level 3 measurements which were derived using a combination of the income approach, market approach and cost approach for the specific assets or liabilities being valued.

5. SEGMENT INFORMATION

The company reports the financial and operating performance for the following four operating segments: (1) ethanol production, which includes the production of ethanol and distillers grains, and recovery of corn oil, (2) agribusiness and energy services, which includes grain handling and storage, commodity marketing and merchant trading for company-produced and third-party ethanol, distillers grains, corn oil, natural gas and other commodities, (3) food and ingredients, which includes cattle feeding, vinegar production and food-grade corn oil operations and (4) partnership, which includes fuel storage and transportation services.

Corporate activities include selling, general and administrative expenses, consisting primarily of compensation, professional fees and overhead costs not directly related to a specific operating segment.

During the normal course of business, the operating segments conduct business with each other. For example, the agribusiness and energy services segment procures grain and natural gas and sells products, including ethanol, distillers grains and corn oil for the ethanol production segment. The partnership segment provides fuel storage and transportation services for the ethanol production segment. These intersegment activities are treated like third-party transactions with origination, marketing and storage fees charged at estimated market values. Consequently, these transactions affect segment performance; however, they do not impact the company’s consolidated results since the revenues and corresponding costs are eliminated.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenues:				
Ethanol production:				
Revenues from external customers	$ 573,399	$ 620,180	$ 1,726,418	$ 1,857,356
Intersegment revenues	3,113	3,579	9,285	6,624
Total segment revenues	576,512	623,759	1,735,703	1,863,980
Agribusiness and energy services:				
Revenues from external customers	174,290	164,604	546,151	483,670
Intersegment revenues	12,692	14,406	38,249	33,679
Total segment revenues	186,982	179,010	584,400	517,349
Food and ingredients:				
Revenues from external customers	251,113	114,750	755,109	329,432
Intersegment revenues	38	38	118	113
Total segment revenues	251,151	114,788	755,227	329,545
Partnership:				
Revenues from external customers	1,298	1,701	4,546	4,724
Intersegment revenues	24,472	24,748	72,949	74,019
Total segment revenues	25,770	26,449	77,495	78,743
Revenues including intersegment activity	1,040,415	944,006	3,152,825	2,789,617
Intersegment eliminations	(40,315)	(42,771)	(120,601)	(114,435)
Revenues as reported	$ 1,000,100	$ 901,235	$ 3,032,224	$ 2,675,182

Refer to Note 2 - Revenue, for further disaggregation of revenue by operating segment.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Cost of goods sold:				
Ethanol production	$ 560,719	$ 590,904	$ 1,706,891	$ 1,802,688
Agribusiness and energy services	179,432	168,735	546,318	487,239
Food and ingredients	236,150	98,854	702,355	281,898
Partnership	-	-	-	-
Intersegment eliminations	(39,917)	(42,706)	(120,220)	(114,123)
	$ 936,384	$ 815,787	$ 2,835,344	$ 2,457,702

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Operating income (loss):				
Ethanol production	$ (15,961)	$ 3,107	$ (60,704)	$ (25,950)
Agribusiness and energy services	2,851	3,686	22,081	13,138
Food and ingredients	8,324	10,132	33,890	30,472
Partnership	16,725	16,290	48,214	47,707
Intersegment eliminations	(325)	8	(113)	(147)
Corporate activities	(10,965)	(12,507)	(34,879)	(30,898)
	$ 649	$ 20,716	$ 8,489	$ 34,322

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
EBITDA:				
Ethanol production	$ 8,475	$ 25,570	$ 4,742	$ 38,521
Agribusiness and energy services	3,537	5,150	24,035	15,910
Food and ingredients	12,151	13,272	47,192	39,741
Partnership	17,913	17,589	51,674	51,549
Intersegment eliminations	(325)	8	(113)	(147)
Corporate activities	(9,716)	(11,212)	(30,533)	(27,275)
	$ 32,035	$ 50,377	$ 96,997	$ 118,299

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Depreciation and amortization:				
Ethanol production	$ 24,289	$ 20,959	$ 65,284	$ 61,443
Agribusiness and energy services	675	1,457	1,923	2,776
Food and ingredients	3,780	3,139	10,628	9,259
Partnership	1,120	1,280	3,406	3,781
Corporate activities	849	999	2,769	2,846
	$ 30,713	$ 27,834	$ 84,010	$ 80,105

The following table reconciles net income (loss) to EBITDA (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income (loss)	$ (7,419)	$ 39,429	$ (23,123)	$ 29,284
Interest expense	23,399	31,889	67,548	69,815
Income tax benefit	(14,658)	(48,775)	(31,438)	(60,905)
Depreciation and amortization	30,713	27,834	84,010	80,105
EBITDA	$ 32,035	$ 50,377	$ 96,997	$ 118,299

The following table sets forth total assets by operating segment (in thousands):

	September 30, 2018	December 31, 2017
Total assets (1):		
Ethanol production	$ 1,075,469	$ 1,144,459
Agribusiness and energy services	404,903	554,981
Food and ingredients	884,205	725,232
Partnership	71,511	74,935
Corporate assets	252,554	295,217
Intersegment eliminations	(3,808)	(10,174)
	$ 2,684,834	$ 2,784,650

(1) Asset balances by segment exclude intercompany balances.

6. INVENTORIES

Inventories are carried at the lower of cost or net realizable value, except grain held for sale and fair-value hedged inventories. Commodities held for sale are reported at market value.

The components of inventories are as follows (in thousands):

	September 30, 2018	December 31, 2017
Finished goods	$ 133,116	$ 146,269
Commodities held for sale	43,328	65,693
Raw materials	126,231	144,520
Work-in-process	426,321	320,664
Supplies and parts	36,202	34,732
	$ 765,198	$ 711,878

7. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The company did not have any changes in the carrying amount of goodwill, which was $182.9 million at September 30, 2018, and December 31, 2017. Goodwill of $30.3 million, $142.0 million and $10.6 million are attributable to the ethanol production segment, food and ingredients segment and the partnership segment, respectively.

Intangible Assets

As of September 30, 2018, the company's customer relationship intangible asset recognized in connection with the Fleischmann Vinegar's acquisition is $69.3 million, net of $10.7 million of accumulated amortization, and has a remaining 13.0-year weighted-average amortization period. As of September 30, 2018, the company also has an indefinite-lived trade name intangible asset of $10.5 million. The company recognized $1.3 million and $4.0 million of amortization expense associated with the amortizing customer relationship intangible asset during the three and nine months ended September 30, 2018, respectively, and $1.1 million and $3.9 million during the three and nine months ended September 30, 2017, respectively, and expects estimated amortization expense for the next five years of $5.3 million per annum. The company's intangible assets are recorded within other assets on the consolidated balance sheets.

8. DERIVATIVE FINANCIAL INSTRUMENTS

At September 30, 2018, the company's consolidated balance sheet reflected unrealized losses of $17.2 million, net of tax, in accumulated other comprehensive income. The company expects these losses will be reclassified to operating income over the next 12 months as a result of hedged transactions that are forecasted to occur. The amount realized in operating income will differ as commodity prices change.

Fair Values of Derivative Instruments

The fair values of the company's derivative financial instruments and the line items on the consolidated balance sheets where they are reported are as follows (in thousands):

	Asset Derivatives' Fair Value		Liability Derivatives' Fair Value	
	September 30, 2018	December 31, 2017	September 30, 2018	December 31, 2017
Derivative financial instruments (1)	$ 12,878	$ 12,045	$ 18,472	$ 12,884
Other assets	1	-	-	-
Other liabilities	-	-	25	92
Total	$ 12,879	$ 12,045	$ 18,497	$ 12,976

(1) At September 30, 2018, derivative financial instruments, as reflected on the balance sheet, include net unrealized gains on exchange traded futures and options contracts of $11.4 million, which included $1.2 million of net unrealized gains on derivative financial instruments designated as cash flow hedging instruments. At September 30, 2018, derivative financial instruments, as reflected on the balance sheet, include net unrealized losses on exchange traded futures and options contracts of $23.3 million, which included $22.5 million of net unrealized losses on derivative financial instruments designated as cash flow hedging instruments. At December 31, 2017, derivative financial instruments, as reflected on the balance sheet, includes net unrealized gains on exchange traded futures and options contracts of $8.5 million, which included $0.3 million of net unrealized gains on derivative financial instruments designated as cash flow hedging instruments.

Refer to Note 4 - Fair Value Disclosures, which contains fair value information related to derivative financial instruments.

Effect of Derivative Instruments on Consolidated Balance Sheets, Consolidated Statements of Operations and Consolidated Statements of Comprehensive Income

The gains or losses recognized in income and other comprehensive income related to the company's derivative financial instruments and the line items on the consolidated financial statements where they are reported are as follows (in thousands):

	Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income			
Location of Gain or (Loss)	Three Months Ended		Nine Months Ended	
Reclassified from Accumulated Other	September 30,		September 30,	
Comprehensive Income into Income	2018	2017	2018	2017
Revenues	$ (3,197)	$ (5,242)	$ (1,749)	$ 1,734
Cost of goods sold	1,350	(1,861)	1,451	(1,679)
Net gain (loss) recognized in earnings before tax	$ (1,847)	$ (7,103)	$ (298)	$ 55

	Loss Recognized in Other Comprehensive Income on Derivatives			
	Three Months Ended		Nine Months Ended	
Loss Recognized in	September 30,		September 30,	
Other Comprehensive Income on Derivatives	2018	2017	2018	2017
Commodity contracts	$ (18,709)	$ (12,235)	$ (1,865)	$ (15,069)

Derivatives Not Designated as Hedging Instruments	Location of Gain or (Loss) Recognized in Income on Derivatives	Amount of Gain or (Loss) Recognized in Income on Derivatives Three Months Ended September 30, 2018	2017	Nine Months Ended September 30, 2018	2017
Commodity contracts	Revenues	$ (2,069)	$ 2,863	$ 5,894	$ (7,400)
Commodity contracts	Costs of goods sold	10,952	2,036	11,075	17,256
Net gain recognized in loss before tax		$ 8,883	$ 4,899	$ 16,969	$ 9,856

As of September 30, 2018, the following amounts were recorded on the consolidated balance sheets related to cumulative basis adjustments for the fair value hedged items (in thousands):

Line Item in the Consolidated Balance Sheet in Which the Hedged Item is Included	Carrying Amount of the Hedged Assets	Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets
Inventories	$ 76,099	$ 6,826

As of December 31, 2017, no amounts were recorded on the consolidated balance sheets related to cumulative basis adjustments for the fair value hedged items.

Effect of Cash Flow and Fair Value Hedge Accounting on the Statement of Operations

The effect of cash flow and fair value hedges and the line items on the consolidated statements of operations where they are reported are as follows (in thousands):

	Location and Amount of Gain or (Loss) Recognized in Income on Cash Flow and Fair Value Hedging Relationships for the Three Months Ended September 30,			
	2018		2017	
	Revenue	Cost of Goods Sold	Revenue	Cost of Goods Sold
Gain (loss) on cash flow hedging relationships:				
Commodity contracts:				
Amount of gain (loss) reclassified from accumulated other comprehensive income into income	$ (3,197)	$ 1,350	$ (5,242)	$ (1,861)
Gain (loss) on fair value hedging relationships:				
Commodity contracts:				
Hedged item	-	(346)	61	(1,775)
Derivatives designated as hedging instruments	-	(186)	(61)	3,085
Total amounts of income and expense line items presented in the statement of operations in which the effects of cash flow or fair value hedges are recorded	$ (3,197)	$ 818	$ (5,242)	$ (551)

21

	Location and Amount of Gain or (Loss) Recognized in Income on Cash Flow and Fair Value Hedging Relationships for the Nine Months Ended September 30,			
	2018		2017	
	Revenue	Cost of Goods Sold	Revenue	Cost of Goods Sold
Gain on cash flow hedging relationships:				
Commodity contracts:				
Amount of gain reclassified from accumulated other comprehensive income into income	$ (1,749)	$ 1,451	$ 1,734	$ (1,679)
Gain (loss) on fair value hedging relationships:				
Commodity contracts:				
Hedged item	-	10,150	1,451	(6,229)
Derivatives designated as hedging instruments	-	(9,064)	(1,734)	8,530
Total amounts of income and expense line items presented in the statement of operations in which the effects of cash flow or fair value hedges are recorded	$ (1,749)	$ 2,537	$ 1,451	$ 622

There were no gains or losses from discontinuing cash flow or fair value hedge treatment during the three and nine months ended September 30, 2018, and 2017.

The open commodity derivative positions as of September 30, 2018, are as follows (in thousands):

September 30, 2018					
	Exchange Traded	Non-Exchange Traded			
Derivative Instruments	Net Long & (Short) (1)	Long (2)	(Short) (2)	Unit of Measure	Commodity
Futures	(52,335)			Bushels	Corn, Soybeans and Wheat
Futures	(11,450) (4)			Bushels	Corn
Futures	5,135			Gallons	Ethanol
Futures	(25,620)			Gallons	Ethanol
Futures	(18,798)			MmBTU	Natural Gas
Futures	(13,413) (4)			MmBTU	Natural Gas
Futures	(57,250)			Pounds	Cattle
Futures	(413,720) (3)			Pounds	Cattle
Futures	21			Barrels	Crude Oil
Futures	(600)			Tons	Soybean Meal
Futures	3,570			Gallons	Natural Gasoline
Options	14,409			Bushels	Corn, Soybeans and Wheat
Options	3,266			Gallons	Ethanol
Options	(74)			MmBTU	Natural Gas
Options	862			Pounds	Livestock
Options	78			Barrels	Crude Oil
Forwards		41,789	(138)	Bushels	Corn and Soybeans
Forwards		19,132	(426,529)	Gallons	Ethanol
Forwards		212	(421)	Tons	DDG
Forwards		12,222	(70,173)	Pounds	Corn Oil
Forwards		22,501	(1,858)	MmBTU	Natural Gas
Forwards		61	(31)	Barrels	Crude Oil

(1) Exchange traded futures and options are presented on a net long and (short) position basis. Options are presented on a delta-adjusted basis.
(2) Non-exchange traded forwards are presented on a gross long and (short) position basis including both fixed-price and basis contracts.
(3) Futures used for cash flow hedges.
(4) Futures used for fair value hedges.

Energy trading contracts that do not involve physical delivery are presented net in revenues on the consolidated statements of operations. Included in revenues are net gains on energy trading contracts of $1.6 million and $12.4

million for the three and nine months ended September 30, 2018, respectively, and net gains of $3.1 million and $18.3 million for the three and nine months ended September 30, 2017, respectively.

9. DEBT

The components of long-term debt are as follows (in thousands):

	September 30, 2018	December 31, 2017
Corporate:		
$500.0 million term loan	$ 495,000	$ 498,750
3.25% convertible notes due 2018	6,897	61,442
3.25% convertible notes due 2019	52,157	-
4.125% convertible notes due 2022	141,163	136,739
Green Plains Partners:		
$235.0 million revolving credit facility	128,000	126,900
Other	26,489	27,744
Total face value of long-term debt	849,706	851,575
Unamortized debt issuance costs	(16,915)	(16,256)
Less: current portion of long-term debt	(65,614)	(67,923)
Total long-term debt	$ 767,177	$ 767,396

The components of short-term notes payable and other borrowings are as follows (in thousands):

	September 30, 2018	December 31, 2017
Green Plains Cattle:		
$500.0 million revolver	$ 376,684	$ 270,860
Green Plains Grain:		
$125.0 million revolver	30,000	75,000
$50.0 million inventory financing	4,032	-
Green Plains Trade:		
$300.0 million revolver	133,737	180,320

Green Plains Commodity Management:		
$20.0 million hedge line	12,113	-
	$ 556,566	$ 526,180

Corporate Activities

On August 29, 2017, the company entered into a $500.0 million term loan agreement, which matures on August 29, 2023, to refinance approximately $405.0 million of total debt outstanding issued by Green Plains Processing and Fleischmann's Vinegar, pay associated fees and expenses and for general corporate purposes. The term loan is guaranteed by the company and substantially all of its subsidiaries, except for Green Plains Partners and certain other entities, and secured by substantially all of the assets of the company, including 17 ethanol production facilities, vinegar production facilities and a second priority lien on the assets secured under the revolving credit facilities at Green Plains Trade, Green Plains Cattle and Green Plains Grain.

The credit agreement contains certain customary representations and warranties, affirmative covenants, negative covenants, financial covenants and events of default. The negative covenants include restrictions on the ability to incur additional indebtedness, acquire and sell assets, create liens, make investments, pay distributions and enter into transactions with affiliates. At the end of each fiscal quarter, the covenants of the credit agreement require the company to maintain a maximum term debt to total term capitalization of 55% and a minimum interest coverage ratio of 1.25 to 1.00, as defined in the credit agreement. Beginning in 2018, the credit facility also has a provision requiring the company to make special annual payments of 50% or 75% of its available free cash flow, subject to certain limitations. Voluntary term loan prepayments are subject to prepayment fees of 1.0% if prepaid before the eighteen-month anniversary of the credit agreement. Scheduled principal payments are $1.25 million each quarter until maturity. The term loan bears interest at a floating rate of a base rate plus a margin of 4.50% or LIBOR plus a margin of 5.50%.

In September 2013, the company issued $120.0 million of 3.25% convertible senior notes due 2018, or the 3.25% notes. The 3.25% notes are senior, unsecured obligations of the company, with interest payable on April 1 and October 1 of each year. Prior to close of the exchange agreements on October 1, 2018, the company could settle the 3.25% notes in cash,

common stock or a combination of cash and common stock. Prior to April 1, 2018, the 3.25% notes were not convertible unless certain conditions are satisfied. The conversion rate is subject to adjustment upon the occurrence of certain events, including when the quarterly cash dividend exceeds $0.04 per share. The conversion rate was recently adjusted as of September 30, 2018, to 50.8753 shares of common stock per $1,000 of principal, which is equal to a conversion price of approximately $19.66 per share. For all conversions of notes which occur on or after April 1, 2018, the company has elected to convert for whole shares of common stock with any fractional share being settled with cash in lieu.

Prior to the close of the exchange agreements on October 1, 2018, the company could redeem all of the 3.25% notes at any time on or after October 1, 2016, if the company's common stock equals or exceeds 140% of the applicable conversion price for a specified time period ending on the trading day immediately prior to the date the company delivers notice of the redemption. The redemption price will equal 100% of the principal plus any accrued and unpaid interest. Holders of the 3.25% notes have the option to require the company to repurchase the 3.25% notes in cash at a price equal to 100% of the principal plus accrued and unpaid interest when there is a fundamental change, such as change in control. If an event of default occurs, it could result in the 3.25% notes being declared due and payable.

During fiscal year 2017, approximately $56.3 million in aggregate principal of the 3.25% notes were exchanged for cash and 2,783,725 shares of the company's common stock. During the three months ended June 30, 2018, an additional 50 shares of the company's common stock were exchanged for approximately $1 thousand in aggregate principal amount of the 3.25% notes.

During the three months ended September 30, 2018, the company entered into exchange agreements with certain beneficial owners of the company's outstanding 3.25% convertible senior notes due 2018 (the "Old Notes"), pursuant to which such Investors exchanged (the "Exchange") $56.8 million in aggregate principal amount of the Old Notes for $56.8 million in aggregate principal amount of notes due 2019 (the "New Notes"). The company evaluated the Exchange in accordance with ASC 470-50 and concluded that the Exchange qualified as a debt modification as the cash flows and fair value of the embedded conversion option of the New Notes were not substantially different from the Old Notes. As a result, the New Notes were recorded at fair value at the time of the exchange, and the company recorded a non-cash adjustment to additional paid-in capital of $4.7 million related to the difference in fair value of the embedded conversion option of the Old Notes and the New Notes. Following the closing of these agreements, $6.9 million aggregate principal of the Old Notes remain outstanding. On October 1, 2018, the maturity date of the Old Notes, the remaining aggregate principal of $6.9 million was paid.

The New Notes are the senior, unsecured obligations of the company and bear interest at a rate of 3.25% per annum, payable semi-annually in arrears on April 1 and October 1 of each year, beginning on October 1, 2018. Interest on the New Notes will accrue from, and including, April 1, 2018. The New Notes will mature on October 1, 2019, unless earlier converted. Holders of New Notes may convert their New Notes, at their option, in integral multiples of $1,000 principal amount, at any time prior to the close of business on the scheduled trading day immediately preceding the maturity date of the New Notes. The conversion rate for the New Notes was initially 50.6481 shares of the company's common stock per $1,000 principal amount of New Notes, which corresponded to an initial conversion price of approximately $19.74 per share of the company's common stock. The conversion rate will be subject to adjustment

upon the occurrence of certain events. Upon conversion of the convertible notes, the company will settle its conversion obligation by delivering shares of its common stock at the applicable conversion rate, together with cash in lieu of any fractional share.

The company does not have the right to redeem the New Notes at its election before their maturity. The New Notes are subject to customary provisions providing for the acceleration of their principal and interest upon the occurrence of events that constitute an “event of default.” Events of default include, among other events, certain payment defaults, defaults in settling conversions, certain defaults under the company’s other indebtedness and certain insolvency-related events. Upon maturity, the company will settle the New Notes in cash.

In August 2016, the company issued $170.0 million of 4.125% convertible senior notes due in 2022, or the 4.125% notes. The 4.125% notes are senior, unsecured obligations of the company, with interest payable on March 1 and September 1 of each year. The company may settle the 4.125% notes in cash, common stock or a combination of cash and common stock.

Prior to March 1, 2022, the 4.125% notes are not convertible unless certain conditions are satisfied. The conversion rate is subject to adjustment upon the occurrence of certain events, including when the quarterly cash dividend exceeds $0.12 per

share and upon redemption of the 4.125% notes. The initial conversion rate is 35.7143 shares of common stock per $1,000 of principal, which is equal to a conversion price of approximately $28.00 per share.

The company may redeem all, but not less than all, of the 4.125% notes at any time on or after September 1, 2020, if the company's common stock equals or exceeds 140% of the applicable conversion price for a specified time period ending on the trading day immediately prior to the date the company delivers notice of the redemption. The redemption price will equal 100% of the principal plus any accrued and unpaid interest. Holders of the 4.125% notes have the option to require the company to repurchase the 4.125% notes in cash at a price equal to 100% of the principal plus accrued and unpaid interest when there is a fundamental change, such as change in control. If an event of default occurs, it could result in the 4.125% notes being declared due and payable.

Ethanol Production Segment

We have small equipment financing loans, capital leases on equipment or facilities, and other forms of debt financing.

Agribusiness and Energy Services Segment

Green Plains Grain has a $125.0 million senior secured asset-based revolving credit facility, to finance working capital up to the maximum commitment based on eligible collateral equal to the sum of percentages of eligible cash, receivables and inventories, less miscellaneous adjustments. The credit facility matures on July 26, 2019. Advances are subject to an interest rate equal to LIBOR plus 3.00% or the lenders' base rate plus 2.00%. The credit facility also includes an accordion feature that enables the facility to be increased by up to $75.0 million with agent approval. The credit facility can also be increased by up to $50.0 million for seasonal borrowings. Total commitments outstanding cannot exceed $250.0 million. The total unused portion of the $125.0 million revolving credit facility is also subject to a commitment fee ranging from 0.375% to 0.50% per annum depending on utilization.

Lenders receive a first priority lien on certain cash, inventory, accounts receivable and other assets owned by Green Plains Grain and a second priority lien on substantially all of the assets of the company, including 17 ethanol production facilities and vinegar production facilities as security on the credit facility. The terms impose affirmative and negative covenants for Green Plains Grain, including maintaining minimum working capital of $22.0 million and tangible net worth of $27.0 million. Capital expenditures are limited to $8.0 million per year under the credit facility, plus equity contributions from the company and unused amounts of up to $8.0 million from the previous year. In addition, the credit facility requires the company to maintain a minimum fixed charge coverage ratio of 1.25 to 1.00 and a maximum annual leverage ratio of 6.00 to 1.00 at the end of each quarter. The fixed charge coverage ratio and long-term capitalization ratio apply only if the company has long-term indebtedness on the date of calculation. As of September 30, 2018, Green Plains Grain had no long-term indebtedness. The credit facility also contains restrictions on distributions related to capital stock, with exceptions for distributions up to 50% of net profit before tax, subject to

certain conditions.

Green Plains Trade has a $300.0 million senior secured asset-based revolving credit facility to finance working capital for marketing and distribution activities based on eligible collateral equal to the sum of percentages of eligible receivables and inventories, less miscellaneous adjustments. The credit facility consists of a $285 million credit facility and a $15 million first-in-last-out (FILO) credit facility, and includes an accordion feature that enables the credit facility to be increased by up to $70.0 million with agent approval. Advances are subject to variable interest rates equal to daily LIBOR plus 2.25% on the credit facility and daily LIBOR plus 3.25% on the FILO credit facility. The total unused portion of the revolving credit facility is also subject to a commitment fee of 0.375% per annum.

The terms impose affirmative and negative covenants for Green Plains Trade, including maintaining a minimum fixed charge coverage ratio of 1.15 to 1.00. Capital expenditures are limited to $1.5 million per year under the credit facility. The credit facility also restricts distributions related to capital stock, with an exception for distributions up to 50% of net income if, on a pro forma basis, (a) availability has been greater than $10.0 million for the last 30 days and (b) the borrower would be in compliance with the fixed charge coverage ratio on the distribution date.

Green Plains Grain has entered into short-term inventory financing agreements with a financial institution. At September 30, 2018, 1.0 million bushels of corn had been designated as collateral under these agreements at initial values totaling $4.2 million. The company has accounted for the agreements as short-term notes, rather than sales, and has elected the fair value option to offset fluctuations in market prices of the inventory. At September 30, 2018, the short-term notes payable were valued at $4.0 million and were measured using Level 2 inputs.

Green Plains Commodity Management has an uncommitted $20.0 million revolving credit facility which matures April 30, 2023 to finance margins related to its hedging programs. Advances are subject to variable interest rates equal to LIBOR plus 1.75%.

Food and Ingredients Segment

Green Plains Cattle has a senior secured asset-based revolving credit facility, which was amended on July 31, 2018, to increase the maximum commitment from $425.0 million to $500.0 million and can be increased by an additional $100.0 million with agent approval. The credit facility, which matures on April 30, 2020, finances working capital for the cattle feeding operations up to the maximum commitment based on eligible collateral equal to the sum of percentages of eligible receivables, inventories and other current assets, less miscellaneous adjustments. Advances, as amended, are subject to variable interest rates equal to LIBOR plus 2.00% to 3.00%, or the base rate plus 1.00% to 2.00%, depending upon the preceding three months' excess borrowing availability. The amended credit facility also includes an accordion feature that enables the credit facility to be increased by up to $75.0 million with agent approval. The unused portion of the credit facility is also subject to a commitment fee of 0.20% to 0.30% per annum, depending on the preceding three months' excess borrowing availability.

Lenders receive a first priority lien on certain cash, inventory, accounts receivable, property and equipment and other assets owned by Green Plains Cattle and a second priority lien on substantially all of the assets of the company, including 17 ethanol production facilities and vinegar production facilities as security on the credit facility. The amended terms impose affirmative and negative covenants, including maintaining a minimum working capital of 15% of the commitment amount, minimum tangible net worth of 20% of the commitment amount, plus 50% of net profit from the previous year, and a maximum total debt to tangible net worth ratio of 3.50 to 1.00. Capital expenditures are limited to $10.0 million per year under the credit facility, plus $10.0 million per year if funded by a contribution from parent, plus any unused amounts from the previous year.

Partnership Segment

Green Plains Partners, through a wholly owned subsidiary, has a $235.0 million revolving credit facility, which matures on July 1, 2020, to fund working capital, acquisitions, distributions, capital expenditures and other general partnership purposes. On February 20, 2018, the partnership accessed an additional $40.0 million to increase the revolving credit facility from $195.0 million to $235.0 million. The credit facility can be increased by an additional $20.0 million without the consent of the lenders. Advances under the credit facility are subject to a floating interest rate based on the preceding fiscal quarter's consolidated leverage ratio at a base rate plus 1.25% to 2.00% or LIBOR plus 2.25% to 3.00%. The unused portion of the credit facility is also subject to a commitment fee of 0.35% to 0.50%, depending on the preceding fiscal quarter's consolidated leverage ratio.

The partnership's obligations under the credit facility are secured by a first priority lien on (i) the capital stock of the partnership's present and future subsidiaries, (ii) all of the partnership's present and future personal property, such as investment property, general intangibles and contract rights, including rights under agreements with Green Plains Trade, and (iii) all proceeds and products of the equity interests of the partnership's present and future subsidiaries and its personal property. The terms impose affirmative and negative covenants including restricting the partnership's ability to incur additional debt, acquire and sell assets, create liens, invest capital, pay distributions and materially amend the partnership's commercial agreements with Green Plains Trade. The credit facility also requires the partnership to maintain a maximum consolidated net leverage ratio of 3.50 to 1.00, and a minimum consolidated interest coverage ratio of 2.75 to 1.00, each of which is calculated on a pro forma basis with respect to acquisitions and divestitures occurring during the applicable period.

Covenant Compliance

The company was in compliance with its debt covenants as of September 30, 2018.

Restricted Net Assets

At September 30, 2018, there were approximately $171.2 million of net assets at the company's subsidiaries that could not be transferred to the parent company in the form of dividends, loans or advances due to restrictions contained in the credit facilities of these subsidiaries.

10. STOCK-BASED COMPENSATION

The company has an equity incentive plan that reserves 4,110,000 shares of common stock for issuance to its directors and employees. The plan provides for shares, including options to purchase shares of common stock, stock appreciation rights tied to the value of common stock, restricted stock, performance shares, and restricted and deferred stock unit awards, to be granted to eligible employees, non-employee directors and consultants. The company measures stock-based compensation at fair value on the grant date, with no adjustments for estimated forfeitures. The company records noncash compensation expense related to equity awards in its consolidated financial statements over the requisite period on a straight-line basis.

Stock Options

The activity related to the exercisable stock options for the nine months ended September 30, 2018, is as follows:

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2017	143,750	$ 12.44	1.8	$ 635
Granted	-	-	-	-
Exercised	(15,000)	10.00	-	120
Forfeited	-	-	-	-
Expired	-	-	-	-
Outstanding at September 30, 2018	128,750	$ 12.72	1.2	$ 577
Exercisable at September 30, 2018 (1)	128,750	$ 12.72	1.2	$ 577

(1) Represents in-the-money options.

Option awards allow employees to exercise options through cash payment for the shares of common stock or simultaneous broker-assisted transactions in which the employee authorizes the exercise and immediate sale of the shares in the open market. The company uses newly issued shares of common stock to satisfy its stock-based payment obligations.

Restricted Stock

The non-vested stock award and deferred stock unit activity for the nine months ended September 30, 2018, is as follows:

	Non-Vested Shares and Deferred Stock Units	Weighted-Average Grant-Date Fair Value	Weighted-Average Remaining Vesting Term (in years)
Non-Vested at December 31, 2017	1,068,947	$ 20.41	
Granted	664,642	18.20	
Forfeited	(14,272)	20.64	
Vested	(541,586)	20.58	
Non-Vested at September 30, 2018	1,177,731	$ 19.08	1.9

Performance Shares

On March 19, 2018, the board of directors granted 153,030 performance shares to be awarded in the form of common stock to certain participants of the plan. Performance shares vest based on the company's average return on net assets (RONA) and the company’s total shareholder return (TSR), as further described herein. The performance shares vest on March 19, 2021, if the RONA and TSR criteria are achieved and the participant is then employed by the company. Fifty percent of the performance shares vest based upon the company’s ability to achieve a predetermined RONA during the three year performance period. The remaining fifty percent of the performance shares vest based upon the company’s total TSR during the three year performance period relative to that of the company’s performance peer group.

The performance shares were granted at a target of 100%, but each performance share will increase or decrease depending on results for the performance period for the company's RONA, and the company's TSR relative to that of the performance peer group. If the company's RONA and TSR achieve the maximum goals, the maximum amount of shares available to be issued pursuant to this award is 229,545 performance shares or 150% of the 153,030 performance shares granted on March 19, 2018. The actual number of performance shares that will ultimately vest is based on the actual percentile ranking of the company's RONA, and the company's TSR compared to the peer performance at the end of the performance period.

The company used the Monte Carlo valuation model to estimate the fair value of the performance shares on the date of the grant. The weighted average assumptions used by the company in applying the Monte Carlo valuation model for performance share grants during the nine months ended September 30, 2018, are illustrated in the following table:

	Nine Months Ended September 30, 2018	
Risk-free interest rate	2.44	%
Dividend yield	2.64	%
Expected volatility	45.11	%

The Monte Carlo valuation also estimated the number of performance shares that would be awarded which is reflected in the fair value on the grant date. The Monte Carlo valuation assumed 97.39% of the performance shares granted on March 19, 2018, would be awarded on March 19, 2021, based upon the estimated company's total shareholder return relative to peer performance. The company's closing stock price was $18.15 on the date of the grant.

At September 30, 2018, unrecognized stock compensation expense of $2.3 million, excluding any potential forfeitures, will be recognized over the vesting period of these performance share awards on a straight-line basis.

Green Plains Partners

Green Plains Partners adopted the LTIP, an incentive plan intended to promote the interests of the partnership, its general partner and affiliates by providing incentive compensation based on units to employees, consultants and directors to encourage superior performance. The incentive plan reserves 2,500,000 common units for issuance in the form of options, restricted units, phantom units, distributable equivalent rights, substitute awards, unit appreciation rights, unit awards, profits interest units or other unit-based awards. The partnership measures unit-based compensation related to equity awards in its consolidated financial statements over the requisite service period on a

straight-line basis.

The non-vested unit-based awards activity for the nine months ended September 30, 2018, is as follows:

	Non-Vested Shares and Deferred Stock Units	Weighted-Average Grant-Date Fair Value	Weighted-Average Remaining Vesting Term (in years)
Non-Vested at December 31, 2017	11,549	$ 19.06	
Granted	18,582	16.96	
Forfeited	-	-	
Vested	(11,549)	19.06	
Non-Vested at September 30, 2018	18,582	$ 16.96	0.8

Stock-Based and Unit-Based Compensation Expense

Compensation costs for stock-based and unit-based payment plans during the three and nine months ended September 30, 2018, were approximately $3.3 million and $8.7 million, respectively, and $3.3 million and $8.8 million during the three and nine months ended September 30, 2017, respectively. At September 30, 2018, there was $14.2 million of unrecognized compensation costs from stock-based and unit-based compensation related to non-vested awards, excluding performance shares noted above. This compensation is expected to be recognized over a weighted-average period of approximately 1.8 years. The potential tax benefit related to stock-based payment is approximately 24.5% of these expenses.

11. EARNINGS PER SHARE

Basic earnings per share, or EPS, is calculated by dividing net income available to common stockholders by the weighted average number of common shares outstanding during the period.

The basic and diluted EPS are calculated as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Basic EPS:				
Net income (loss) attributable to Green Plains	$ (12,469)	$ 34,394	$ (37,580)	$ 14,431
Weighted average shares outstanding - basic	40,229	41,348	40,189	40,008
EPS - basic	$ (0.31)	$ 0.83	$ (0.94)	$ 0.36
Diluted EPS:				
Net income (loss) attributable to Green Plains	$ (12,469)	$ 34,394	$ (37,580)	$ 14,431
Interest and amortization on convertible debt, net of tax effect:				
3.25% notes due 2018	-	840	-	3,582
4.125% notes due 2022	-	2,050	-	6,089
Net income (loss) attributable to Green Plains - diluted	$ (12,469)	$ 37,284	$ (37,580)	$ 24,102
Weighted average shares outstanding - basic	40,229	41,348	40,189	40,008
Effect of dilutive convertible debt:				
3.25% notes due 2018	-	3,178	-	4,551
4.125% notes due 2022	-	6,071	-	6,071
Effect of dilutive stock-based compensation awards	-	50	-	63
Weighted average shares outstanding - diluted	40,229	50,647	40,189	50,693
EPS - diluted	$ (0.31)	$ 0.74	$ (0.94)	$ 0.48

Excluded from the computation of diluted EPS were 10.3 million and 10.2 million shares related to the effect of the convertible debt and stock-based compensation awards for the three and nine months ended September 30, 2018, as the inclusion of these shares would have been antidilutive.

12. STOCKHOLDERS' EQUITY

Components of stockholders' equity are as follows (in thousands):

	Common Stock Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accum. Other Comp. Income	Treasury Stock Shares	Amount	Total Green Plains Stockholders' Equity	Non-Controlling Interests	Total Stockholders' Equity
Balance, December 31, 2017	46,410	$ 46	$ 685,019	$ 325,411	$ (13,110)	5,326	$ (55,184)	$ 942,182	$ 116,954	$ 1,059,136
Reclassification of certain tax effects from other comprehensive loss (Note 1)	-	-	-	2,787	(2,787)	-	-	-	-	-
Balance, January 1, 2018	46,410	46	685,019	328,198	(15,897)	5,326	(55,184)	942,182	116,954	1,059,136
Net income (loss)	-	-	-	(37,580)	-	-	-	(37,580)	14,457	(23,123)
Cash dividends and distributions declared	-	-	-	(14,536)	-	-	-	(14,536)	(16,385)	(30,921)
Other comprehensive loss before reclassification	-	-	-	-	(1,522)	-	-	(1,522)	-	(1,522)
Amounts reclassified from accumulated other comprehensive loss	-	-	-	-	243	-	-	243	-	243
Other comprehensive loss, net of tax	-	-	-	-	(1,279)	-	-	(1,279)	-	(1,279)
	-	-	4,660	-	-	-	-	4,660	-	4,660

Modification of 3.25% convertible notes due 2019										
Exchange of 3.25% convertible notes due 2018	-	-	-	-	-	-	1	1	-	1
Stock-based compensation	321	1	5,314	-	-	-	-	5,315	196	5,511
Stock options exercised	15	-	150	-	-	-	-	150	-	150
Balance, September 30, 2018	46,746	$ 47	$ 695,143	$ 276,082	$ (17,176)	5,326	$ (55,183)	$ 898,913	$ 115,222	$ 1,014,135

Amounts reclassified from accumulated other comprehensive income are as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,		Statements of Operations
	2018	2017	2018	2017	Classification
Gains (losses) on cash flow hedges:					
Commodity derivatives	$ (3,197)	$ (5,242)	$ (1,749)	$ 1,734	Revenues
Commodity derivatives	1,350	(1,861)	1,451	(1,679)	Cost of goods sold
Total	(1,847)	(7,103)	(298)	55	Loss before income taxes
Income tax expense (benefit)	(420)	(2,650)	(55)	21	Income tax benefit
Amounts reclassified from accumulated other comprehensive income (loss)	$ (1,427)	$ (4,453)	$ (243)	$ 34	

13. INCOME TAXES

The company records actual income tax expense or benefit during interim periods rather than on an annual effective tax rate method. Certain items are given discrete period treatment and the tax effect of those items are reported in full in the relevant interim period. Green Plains Partners is a limited partnership, which is treated as a flow-through entity for federal income tax purposes and is not subject to federal income taxes. As a result, the consolidated financial statements do not reflect income taxes on pre-tax income or loss attributable to the noncontrolling interest in the

partnership.

The Tax Cuts and Jobs Act was enacted on December 22, 2017 and is effective January 1, 2018. The Act reduced the federal tax rate to 21%. Due to the significance of the legislation, the SEC issued Staff Accounting Bulletin 118 (SAB 118), which provides a measurement period to complete the accounting for certain elements of the tax reform. The company is still analyzing certain other provisions of the legislation and its impact to future income taxes, including interest expense limitation to 30% of adjusted taxable income, use of AMT credit carryforwards, limitation of net operating loss carryforwards to 80% of taxable income, and deducibility of officer compensation. Any subsequent adjustments, if needed, will be recorded as tax expense during the fourth quarter of 2018.

The company recorded income tax benefit of $14.7 million and $31.4 million for the three and nine months ended September 30, 2018, respectively, compared with $48.8 million and $60.9 million for the same periods in 2017. The decrease in income tax benefit was due primarily to the company's recognition of tax benefits of $18.4 million during the nine months ended September 30, 2018, compared to $49.5 million for the same period in 2017, for federal and state R&D Credits relating to current and prior periods.

The amount of unrecognized tax benefits for uncertain tax positions was $50.4 million as of September 30, 2018, and $26.0 million as of December 31, 2017. Recognition of these benefits would have a favorable impact on the company's effective tax rate.

The 2018 effective tax rate can be affected by variances in the estimates and amounts of taxable income among the various states, entities and activity types, realization of tax credits, adjustments from resolution of tax matters under review, valuation allowances and the company's assessment of its liability for uncertain tax positions.

14. COMMITMENTS AND CONTINGENCIES

Operating Leases

The company leases certain facilities, equipment and parcels of land under agreements that expire at various dates. For accounting purposes, rent expense is based on a straight-line amortization of the total payments required over the lease. The company incurred lease expenses of $9.0 million and $29.7 million during the three and nine months ended September 30, 2018, respectively, and $11.2 million and $33.4 million during the three and nine months ended September 30, 2017, respectively.

Aggregate minimum lease payments under these agreements for the remainder of 2018 and in future years are as follows (in thousands):

Year Ending December 31,	Amount
2018	$ 9,989
2019	24,808
2020	18,052
2021	10,574

2022	8,252
Thereafter	32,245
Total	$ 103,920

Commodities

As of September 30, 2018, the company had contracted future purchases of grain, corn oil, natural gas, crude oil, ethanol, distillers grains and cattle, valued at approximately $411.9 million.

Legal

In November 2013, the company acquired two ethanol plants located in Fairmont, Minnesota and Wood River, Nebraska. There is ongoing litigation related to the consideration for this acquisition. On August 19, 2016, the Delaware Superior Court granted Green Plains' motion for summary judgment in part and held that the seller's attempt to disclaim liability for certain shortfall amounts through the use of a disclaimer provision was ineffective. Based on the court order, the company determined that previously accrued contingent liabilities of approximately $6.3 million no longer represented probable losses. These accruals were reversed as a reduction of cost of goods sold during the year ended December 31, 2016, because the adjustment relates to a reduction in the cost of inventory purchased in the acquisitions. Per the court's direction, the company and the seller retained an independent accounting firm to determine if a shortfall exists and the precise shortfall due to Green Plains. The accounting firm has concluded that a shortfall does exist consistent with the company's calculations, and the matter is now back in the hands of the Court to review and enter its order. On October 30, 2018, the ongoing litigation was settled and will be recorded in the fourth quarter.

In addition to the above-described proceeding, the company is currently involved in litigation that has arisen in the ordinary course of business, but does not believe any pending litigation will have a material adverse effect on its financial position, results of operations or cash flows.

15. RELATED PARTY TRANSACTIONS

Commercial Contracts

In March 2014, a subsidiary of the company entered into $1.4 million of new equipment financing agreements with Amur Equipment Finance, whom Gordon Glade, a member of the company's board of directors, was formerly a shareholder. Amur Equipment Finance is no longer considered a related party as of the third quarter of 2018. Balances of $0.4 million and $0.6 million related to these financing arrangements were included in debt at September 30, 2018, and December 31, 2017, respectively. Payments, including principal and interest, totaled $69 thousand and $207 thousand during each of the three and nine months ended September 30, 2018, and 2017, respectively. The weighted average interest rate for the financing agreements with Amur Equipment Finance was 6.8%.

Aircraft Leases

Effective January 1, 2015, the company entered into two agreements with an entity controlled by Wayne Hoovestol for the lease of two aircrafts. Mr. Hoovestol is chairman of the company's board of directors. The company agreed to pay $9,766 per month for the combined use of up to 125 hours per year of the aircrafts. Flight time in excess of 125 hours per year will incur additional hourly charges. Payments related to these leases totaled $39 thousand and $126 thousand during the three months ended September 30, 2018, respectively, and $39 thousand and $141 thousand during the three and nine months ended September 30, 2017, respectively. The company had no outstanding payables related to these agreements as of September 30, 2018, and $2 thousand in outstanding payables related to these agreements as of December 31, 2017.

16. SUBSEQUENT EVENTS

Seventh Amendment to Credit Agreement – Green Plains Cattle Company LLC

On October 5, 2018, the company amended its revolving credit facility to provide the Joint Administrator, at its sole discretion, irrevocable authorization to (1) release any term loan priority collateral; (2) release any guarantor related to any release of any term loan priority collateral and/or (3) release the guaranty upon termination of the term loan agreement and repayment of all obligations owed by the company under the term loan agreement.

Asset Purchase Agreement – Valero Renewable Fuels Company, LLC and Green Plains Partners LP

On October 8, 2018, the company entered into an Asset Purchase Agreement to sell three of its ethanol plants located in Bluffton, Indiana, Lakota, Iowa, and Riga, Michigan to Valero Renewable Fuels Company, LLC ("Valero"). The estimated sales price for the facilities is $300 million plus approximately $22 million of related working capital. Correspondingly, the company entered into a separate Asset Purchase Agreement (the "Asset Purchase Agreement") with the partnership for $120.9 million (the "Transaction"), subject to certain other post-closing adjustments, to acquire the related storage assets to be disposed of in the sale to Valero. In addition, approximately 525 of the 3,500 railcars leased by the partnership are anticipated to be conveyed to the company as part of the Transaction. Upon closing of the Transaction, the company anticipates recording an estimated pre-tax gain of approximately $100 million. The company anticipates using proceeds from the Transaction to repay its term debt.

The partnership will receive approximately 8.9 million units owned by the company as payment. The Asset Purchase Agreement provides for the closing of the Transaction to occur immediately prior to the company's sale to Valero.

The company and the partnership agreed, upon closing, to extend the storage and throughput services agreement with Green Plains Trade an additional three years to June 30, 2028. Upon closing, the quarterly minimum volume commitment associated with the storage and throughput services agreement will be 235.7 million gallons or, approximately 80% of the new Green Plains annual production capacity of 1.183 billion gallons.

The aforementioned transactions are anticipated to close during the fourth quarter of 2018, subject to customary closing conditions and regulatory approvals.

Third Amendment to Credit Agreement – Green Plains Operating Company LLC

On October 12, 2018, the partnership amended its revolving credit facility to allow the sale of the ethanol storage assets associated with up to six ethanol plants owned by Green Plains with no more than 600 million gallons of production capacity. Upon close of such sale, the revolving credit facility available will be decreased from $235 million to $200 million. In

addition, the lenders permitted the exchange of units as consideration for the transaction and also permitted modifications of various key operating agreements. There were no other significant changes in other covenants.

Stock Purchase Agreement – Kerry Holding Co.

On October 23, 2018, the company entered into a stock purchase agreement (the “Stock Purchase Agreement”) with Kerry Holding Co. to sell all of the issued and outstanding capital stock of Fleischmann’s Vinegar Company, Inc. for $350 million in cash, subject to certain post-closing working capital adjustments. Upon closing of the transaction, the company anticipates recording an estimated pre-tax gain of approximately $62 million. The company anticipates using proceeds from the transaction to repay its term debt.

The closing of the transaction, which is expected to occur during the fourth quarter of 2018, is subject to customary closing conditions and regulatory approvals. The Stock Purchase Agreement contains normal and customary representations and warranties, and indemnification obligations.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

General

The following discussion and analysis provides information we believe is relevant to understand our consolidated financial condition and results of operations. This discussion should be read in conjunction with the consolidated financial statements and notes to the consolidated financial statements contained in this report and other quarterly reports filed with the SEC after December 31, 2017, together with our annual report on Form 10-K for the year ended December 31, 2017.

Cautionary Information Regarding Forward-Looking Statements

Forward-looking statements are made in accordance with safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are based on current expectations that involve a number of risks and uncertainties and do not relate strictly to historical or current facts, but rather to plans and objectives for future operations. These statements may be identified by words such as "anticipate," "believe," "continue," "estimate," "expect," "intend," "outlook," "plan," "predict," "may," "could," "should," "will" and similar expressions, as well as statements regardin operating or financial performance or guidance, business strategy, environment, key trends and benefits of actual or planned acquisitions.

Factors that could cause actual results to differ from those expressed or implied in the forward-looking statements include, but are not limited to, those discussed in Part I, Item 1A – Risk Factors of our annual report on Form 10-K for the year ended December 31, 2017, in Part II – Risk Factors of this report, or incorporated by reference. Specifically, we may experience significant fluctuations in future operating results due to a number of economic conditions, including: competition in the ethanol industry and other industries in which we operate; commodity market risks including those that may result from weather conditions; financial market risks; counterparty risks; risks associated with changes to government policy or regulation, risks related to acquisitions and achieving anticipated results; risks associated with merchant trading, cattle feeding operations, vinegar production; risks related to our portfolio optimization strategy and other risk factors detailed in reports filed with the SEC. Additional risks related to Green Plains Partners LP include compliance with commercial contractual obligations, potential tax consequences related to our investment in the partnership and risks disclosed in the partnership's SEC filings associated with the operation of the partnership as a separate, publicly traded entity.

We believe our expectations regarding future events are based on reasonable assumptions; however, these assumptions may not be accurate or account for all risks and uncertainties. Consequently, forward-looking statements are not guaranteed. Actual results may vary materially from those expressed or implied in our forward-looking statements. In addition, we are not obligated, nor do we intend to update our forward-looking statements as a result of

new information unless it is required by applicable securities laws. We caution investors not to place undue reliance on forward-looking statements, which represent management's views as of the date of this report or documents incorporated by reference.

Overview

Green Plains is a diversified commodity-processing business with operations related to ethanol production, grain handling and storage, cattle feedlots, food ingredients, and commodity marketing and logistics services. We are focused on generating stable operating margins through our diversified business segments and risk management strategy. Green Plains Partners LP is our primary downstream logistics provider, storing and delivering the ethanol we produce. As of September 30, 2018, we own a 62.4% limited partner interest, a 2.0% general partner interest and all of the partnership's incentive distribution rights. The public owns the remaining 35.6% limited partner interest. The partnership is consolidated in our financial statements.

Recent Developments

Stock Purchase Agreement – Kerry Holding Co.

On October 23, 2018, we entered into a stock purchase agreement (the "Stock Purchase Agreement") with Kerry Holding Co. to sell all of the issued and outstanding capital stock of Fleischmann's Vinegar Company, Inc. for $350 million in cash, subject to certain post-closing working capital adjustments. Upon closing of the transaction, we anticipate recording an estimated pre-tax gain of $62 million. We anticipate using proceeds from the transaction to repay our term debt.

The closing of the transaction, which is expected to occur during the fourth quarter of 2018, is subject to customary closing conditions and regulatory approvals. The Stock Purchase Agreement contains normal and customary representations and warranties, and indemnification obligations.

Extension of Offer Period – JGP Energy Partners

Effective October 15, 2018, we agreed with the partnership to extend the offer period related to the potential purchase of the Green Plains interest in the JGP Energy Partners Beaumont, Texas terminal until June 30, 2019.

Third Amendment to Credit Agreement – Green Plains Operating Company LLC

On October 12, 2018, the partnership amended the revolving credit facility to allow the sale of the ethanol storage assets of up to six ethanol plants owned by Green Plains with no more than 600 million gallons of production capacity. Upon close of such sale, the revolving credit facility available will be decreased from $235 million to $200 million. In addition, the lenders permitted the exchange of units as consideration for the transaction and also permitted modifications of various key operating agreements. There were no other significant changes in other covenants.

Asset Purchase Agreement – Valero Renewable Fuels Company, LLC and Green Plains Partners LP

On October 8, 2018, we entered into an Asset Purchase Agreement to sell three of our ethanol plants located in Bluffton, Indiana, Lakota, Iowa, and Riga, Michigan to Valero Renewable Fuels Company, LLC (“Valero”). The estimated sales price for the facilities is $300 million plus approximately $22 million of related working capital. Correspondingly, we entered into a separate Asset Purchase Agreement (the “Asset Purchase Agreement”) with the partnership for $120.9 million (the “Transaction”), subject to certain other post-closing adjustments, to aquire the related storage assets to be disposed of in the sale to Valero. In addition, approximately 525 of the 3,500 railcars leased by the partnership are anticipated to be conveyed to the company as part of the Transaction. Upon closing of the Transaction, we anticipate recording an estimated pre-tax gain of approximately $100 million. We anticipate using proceeds from the transaction to repay our term debt.

The partnership will receive approximately 8.9 million units owned by the company as payment. The Asset Purchase Agreement provides for the closing of the Transaction to occur immediately prior to the company’s sale to Valero.

We have agreed with the partnership, upon closing, to extend the storage and throughput services agreement with Green Plains Trade an additional three years to June 30, 2028. Upon closing, the quarterly minimum volume commitment associated with the storage and throughput services agreement will be 235.7 million gallons or, approximately 80% of the new Green Plains annual production capacity of 1.183 billion gallons.

The aforementioned transactions are anticipated to close during the fourth quarter of 2018, subject to customary closing conditions and regulatory approvals.

Seventh Amendment to Credit Agreement – Green Plains Cattle Company

On October 5, 2018, the company amended its revolving credit facility to provide the Joint Administrator, at its sole discretion, irrevocable authorization to (1) release any term loan priority collateral; (2) release any guarantor related to any release of any term loan priority collateral and/or (3) release the guaranty upon termination of the term loan agreement and repayment of all obligations owed by the company under the term loan agreement.

3.25% Convertible Notes due 2018

On October 1, 2018, upon maturity, the remaining aggregate principal of $6.9 million related to the 3.25% notes due in 2018 was settled in cash.

Bartlett Cattle Company, L.P. Aquisition

On July 27, 2018, we entered into an asset purchase agreement to acquire two feeding operations from Bartlett Cattle Company, L.P. for $16.2 million, plus working capital of approximately $106.6 million. The transaction includes two feed yards located in Sublette, Kansas and Tulia, Texas and will add combined feedlot capacity of 97,000 head of cattle to the company’s operations. The transaction will be financed using cash on hand and proceeds from the Green Plains Cattle senior secured asset-based revolving credit facility. The transaction closed on August 1, 2018 following receipt of regulatory approval.

DKGP Energy Terminals LLC Membership Interest Purchase Agreement with AMID Merger LP Termination

On February 16, 2018, the partnership and Delek Logistics Partners LP formed DKGP Energy Terminals LLC, a 50/50 joint venture, to acquire and manage light products terminal assets in Texas and Arkansas. In conjunction with the formation of the joint venture, DKGP executed a membership interest purchase agreement with AMID Merger LP, to acquire all of the membership interests of AMID Refined Products LLC ("AMID") for approximately $138.5 million. Due to regulatory obstacles, on August 1, 2018, DKGP Energy Terminals LLC notified AMID Merger LP of its termination of the membership interest purchase agreement.

Results of Operations

During the third quarter of 2018, our average utilization rate was approximately 81.3% of capacity, resulting in ethanol production of 304.8 mmg for the third quarter of 2018, compared with 313.6 mmg, or 83.7% of capacity, for the same quarter last year. We continue to evaluate our production run rates and will flex our production depending on market conditions.

U.S. Ethanol Supply and Demand

According to the EIA, domestic ethanol production averaged 1.06 million barrels per day during the third quarter of 2018, which was slightly higher than the 1.04 million barrels for the previous quarter, but 3.0% higher than the same quarter of last year. Year-to-date, production volumes are up 2.2% in 2018 compared with the same period in 2017. Refiner and blender input volume increased slightly to 932 thousand barrels per day for the third quarter of 2018 compared with 931 thousand barrels per day for the same quarter last year. Gasoline demand was down slightly by 69 thousand barrels per day in the third quarter of 2018 or 0.7% compared to the same period a year ago. As of September 30, 2018, there were 1,628 retail stations selling E15 in 30 states, up from 1,210 at the beginning of the year, according to Growth Energy. Ethanol futures traded at an average discount of $0.71 to RBOB during the third quarter of 2018 related to weaker ethanol demand. U.S. domestic ethanol ending stocks increased by approximately 1.9 million barrels to 23.4 million barrels on September 30, 2018, year over year.

Global Ethanol Supply and Demand

According to the USDA Foreign Agriculture Service, year-to-date domestic ethanol exports through September 30, 2018, were 1.24 bg, up 25%, from 992.9 mmg for the comparable period in 2017. Brazil remained the largest export destination for U.S. ethanol, which accounted for 30% of domestic ethanol export volume despite the 20% tariff on U.S. ethanol imports in excess of 150 million liters, or 39.6 million gallons per quarter, imposed in September 2017

by Brazil's Chamber of Foreign Trade, or CAMEX. Canada, India, and South Korea accounted for 21%, 7% and 5%, respectively, of U.S. ethanol exports.

On April 1, 2018, China announced it would add an additional 15% tariff to the existing 30% tariff it had earlier imposed on ethanol imports from the United States and Brazil. The cost to produce the equivalent amount of starch found in sugar from $3.50-per-bushel corn is 7 cents per pound. The average price of sugar was approximately 12 cents per pound during the third quarter of 2018, compared with an average of 15 cents per pound for 2017. We currently estimate that net ethanol exports will reach between 1.6 billion gallons and 1.7 billion gallons in 2018 based on historical demand from a variety of countries and certain countries who seek to improve their air quality and eliminate MTBE from their own fuel supplies.

U.S. Protein Supply and Demand

During the third quarter of 2018, the market sentiment for cattle continued to be optimistic due to anticipated lower cost of feed, strong domestic beef consumption and robust export demand for beef. Corn prices remained on the lower end of their 2018 range, according to the Chicago Mercantile Exchange. Domestic beef consumption per capita in 2018 is projected to increase 0.8 pound to 57.7 pounds per person compared with 2017. Export demand for beef is forecasted to increase approximately 10.6% in 2018 compared with 2017 according to the USDA.

Cow-calf operations continue to be profitable, which has supported a period of expansion. Since the fourth quarter of 2017, the lack of precipitation threatened to force the liquidation of breeding stock on many ranches throughout the south and southwestern United States. Year-to-date domestic cattle on feed increased 5.93% to 11.125 million head through October 1, 2018, compared to the same period last year.

Packer demand was driven by strong domestic and international beef demand. Total steer and heifer slaughter through the end of August of 2018 increased 2.1% compared with the first eight months 2017. Slaughter capacity constraints, primarily due to labor shortages, have limited the packers' ability to increase slaughter rates at the same pace as cattle on feed inventories, resulting in higher packer margins. However, these higher margins should incentivize the packers to increase slaughter capacity, which will be crucial for cattle feeding margins moving forward.

The U.S. looks poised to grow its global market share for animal protein while Australia continues to struggle with drought conditions and food safety scandals plague South America.

Year-to-date U.S. distillers grains exports through August 31, 2018, were 7.9 million metric tons, or 8.6% higher than the same period last year, according to the USDA Foreign Agriculture Service. Shipments of distillers grains to Southeast Asia increased 90% year over year due to growing demand for protein, which helped keep export volumes in line with last year. Mexico, South Korea, Vietnam, Thailand, Indonesia and Turkey, accounted for approximately 58% of total U.S. distillers export volumes.

Legislation and Regulation

We are sensitive to government programs and policies that affect the supply and demand for ethanol and other fuels, which in turn may impact the volume of ethanol and other fuels we handle. Congress may also consider legislation that would impact the RFS. Bills have been introduced in the House and Senate, which would either sunset the RFS entirely or sunset the corn based ethanol portion of the mandate.

Federal mandates supporting the use of renewable fuels are a significant driver of ethanol demand in the U.S. Ethanol policies are influenced by environmental concerns, diversifying our fuel supply, and an interest in reducing the country's dependence on foreign oil. Consumer acceptance of flex-fuel vehicles and higher ethanol blends of ethanol in non-flex-fuel vehicles may be necessary before ethanol can achieve significant growth in U.S. market share. CAFE, which was first enacted by Congress in 1975 to reduce energy consumption by increasing the fuel economy of cars and light trucks, provides a 54% efficiency bonus to flexible-fuel vehicles running on E85. Another important factor is a waiver in the Clean Air Act, known as the One-Pound Waiver, which allows E10 to be sold year-round, even though it exceeds the Reid vapor pressure limitation of nine pounds per square inch. However, the One-Pound Waiver does not apply to E15 or higher blends, even though it has similar physical properties to E10, so its sale is limited to flex-fuel vehicles only during the June 1 to September 15 summer driving season.

On October 8, 2018, President Trump directed the EPA to begin rulemaking to expand the One-Pound Waiver to E15 so it can be sold year round. The EPA will follow the Administrative Procedure Act in proposing a rule, accepting public comment, and then issuing a final rule. The President has stated a goal of having a final rule out before the start of summer driving season on June 1, 2019. Any final rule from the agency is susceptible to legal challenges.

When RFS II was passed in 2007 and rulemaking finalized in October 2010, the required volume of conventional renewable fuel to be blended with gasoline was to increase each year until it reached 15.0 billion gallons in 2015. In November 2017, the EPA announced it would maintain the 15.0 billion gallon mandate for conventional ethanol in 2018. In June 2018, the EPA proposed to maintain 15.0 billion gallons for 2019, and plans to finalize the rule by November 30, 2018.

The EPA has the authority to waive the mandates in whole or in part if there is inadequate domestic renewable fuel supply or the requirement severely harms the economy or environment. According to RFS II, if mandatory renewable fuel volumes are reduced by at least 20% for two consecutive years, the EPA is required to modify, or reset, statutory volumes through 2022. While conventional ethanol maintained 15 billion gallons, 2018 is the first year the total proposed RVOs are more than 20% below statutory volumes levels. Thus, the EPA Administrator directed his staff to initiate the required technical analysis to perform any future reset consistent with the reset rules. The reset will be triggered if the final 2019 RVOs continue to be more than 20% below the statutory levels, as is expected, and the EPA will be required to modify statutory volumes through 2022 within one year of the trigger event, based on the same factors used to set the RVOs post-2022.

The EPA assigns individual refiners, blenders, and importers the volume of renewable fuels they are obligated to use based on their percentage of total domestic transportation fuel sales. Obligated parties use RINs to show compliance with RFS-mandated volumes. RINs are attached to renewable fuels by producers and detached when the renewable fuel is blended with transportation fuel or traded in the open market. The market price of detached RINs affects the price of ethanol in certain markets and influences the purchasing decisions by obligated parties.

The EPA can, in consultation with the Department of Energy, waive the obligation for individual refineries that are suffering "disproportionate economic hardship" due to compliance with the RFS. To qualify, the refineries must be under 75,000 barrels per day and state their case for an exemption in an application to the EPA each year. The previous administration issued these sparingly, granting 7 of 15 petitions in 2015, in whole or in part, for a total of 292.5 million gallons.

The current administration has been granting these at a much higher rate, waiving the obligation for 19 of 20 applicants for compliance year 2016, totaling 790 million gallons, and 29 of 33 for compliance year 2017, totaling 1.46 billion gallons. This effectively reduces the annual RVO by that amount, since the waived gallons are not reallocated to other obligated parties at this time. The resulting surplus of RINs in the market has brought values down significantly, from the mid $0.80 range early in the year to around $0.10. Since the RIN value helps to make higher blends of ethanol more cost effective, lower RIN values could negatively impact retailer and consumer adoption of E15 and higher blends.

On July 28, 2017, the U.S. Federal District Court for the D.C. Circuit ruled in favor of the Americans for Clean Energy and its petitioners against the EPA related to its decision to lower the 2016 volume requirements. The Court concluded the EPA erred in how it interpreted the "inadequate domestic supply" waiver provision of RFS II, which authorizes the EPA to consider supply-side factors affecting the volume of renewable fuel available to refiners, blenders and importers to meet statutory volume requirements. The waiver provision does not allow the EPA to consider the volume of renewable fuel available to consumers or the demand-side constraints that affect the consumption of renewable fuel by consumers. As a result, the Court vacated the EPA's decision to reduce the total renewable fuel volume requirements for 2016 through its waiver authority, which the EPA is expected to address. We believe this decision to confine the EPA's waiver analysis to supply considerations benefits the industry overall and expect the primary impact will be on the RINs market. The EPA has not yet accounted for the 500 million gallons that the court in the Americans for Clean Energy case directed.

Valero Energy and refining trade group American Fuel and Petrochemical Manufacturers (AFPM) have challenged the EPA's handling of the U.S. biofuel mandate in separate actions on January 26, 2018. AFPM is asking the D.C. U.S. Court of Appeals to review the EPA's November 2017 decision to reject proposed changes to the structure of the RFS, including moving the point of obligation from refiners and importers of fuel to fuel blenders. Valero filed two petitions with the same court, one seeking review of the annual RVO rule set by the EPA for 2018 and 2019, which dictates the volumes of renewable fuels to be blended in the coming years, and a second arguing against the EPA's December 2017 assertion that the agency has fulfilled its duty to periodically review the RFS as directed by statute.

Government actions abroad can significantly impact the demand for U.S. ethanol. In September 2017, China's National Development and Reform Commission, the National Energy Board and 15 other state departments issued a joint plan to expand the use and production of biofuels containing up to 10% ethanol by 2020. China, the number three importer of U.S. ethanol in 2016, imported negligible volumes during the year due to a 30% tariff imposed on U.S. and Brazil fuel ethanol, which took effect in January 2017. There is no assurance the recently issued joint plan will lead to

increased imports of U.S. ethanol, and recent trade tensions have caused China to raise their tariff on ethanol to 45% and then to 70%. Our exports also face tariff rate quotas, countervailing duties, and other hurdles in Brazil, the European Union, India, Peru, and elsewhere, which limits our ability to compete in some markets.

In Brazil, the Secretary of Foreign Trade issued an official written resolution, imposing a 20% tariff on U.S. ethanol imports in excess of 150 million liters, or 39.6 million gallons per quarter in September 2017. The ruling is valid for two years. In June 2017, the Energy Regulatory Commission of Mexico (CRE) approved the use of 10% ethanol blends, which was challenged by nine lawsuits. Four cases were dismissed. The five remaining cases follow one of two tracks: 1) to determine the constitutionality of the CRE regulation, or 2) to determine the benefits, or lack thereof, of introducing E10 to Mexico. Five of these cases were initially denied and are going through the appeals process. An injunction was granted in October 2017, preventing the blending and selling of E10, but was overturned by a higher court in June 2018 making it legal to blend and sell E10 by PEMEX throughout Mexico except for its three largest metropolitan areas. U.S. ethanol exports to Mexico totaled 30 mmg in 2017.

The Tax Cuts and Jobs Act was enacted on December 22, 2017 and is effective January 1, 2018. We continue to analyze the Act’s impact to current and future taxes. We are also following the guidance of SAB 118 which provides a measurement period to complete accounting for certain elements of the tax reform. On March 23, 2018, Congress rescinded an unintended consequence of the Act under section 199A, which provided certain tax benefits to producers selling grain to cooperative associations and enabled a potential marketplace advantage over other agribusiness companies.

Comparability of our Financial Results

We report the financial and operating performance for the following four operating segments: (1) ethanol production, which includes the production of ethanol and distillers grains, and recovery of corn oil, (2) agribusiness and energy services, which includes grain handling and storage, commodity marketing and merchant trading for company-produced and third-party ethanol, distillers grains, corn oil, natural gas and other commodities, (3) food and ingredients, which includes cattle feeding, vinegar production and food-grade corn oil operations and (4) partnership, which includes fuel storage and transportation services.

During the normal course of business, our operating segments do business with each other. For example, our agribusiness and energy services segment procures grain and natural gas and sells products, including ethanol, distillers grains and corn oil of our ethanol production segment. Our partnership segment provides fuel storage and transportation services for our agribusiness and energy services segment. These intersegment activities are treated like third-party transactions with origination, marketing and storage fees charged at estimated market values. Consequently, these transactions affect segment performance; however, they do not impact our consolidated results since the revenues and corresponding costs are eliminated.

Corporate activities include selling, general and administrative expenses, consisting primarily of compensation, professional fees and overhead costs not directly related to a specific operating segment. When we evaluate segment performance, we review the following segment information as well as earnings before interest, income taxes, depreciation and amortization, or EBITDA.

The company also owns a 90.0% interest in BioProcess Algae, a joint venture formed in 2008. Beginning April 1, 2016, we consolidate the financial results of BioProcess Algae, and record a noncontrolling interest for the economic interest in the joint venture held by others.

As of September 30, 2018, we, together with our subsidiaries, own a 62.4% limited partner interest and a 2.0% general partner interest in the partnership and own all of the partnership’s incentive distribution rights, with the remaining 35.6% limited partner interest owned by public common unitholders. We consolidate the financial results of the partnership, and record a noncontrolling interest for the economic interest in the partnership held by the public common unitholders.

Segment Results

The selected operating segment financial information are as follows (in thousands):

	Three Months Ended September 30,		%	Nine Months Ended September 30,		%
	2018	2017	Variance	2018	2017	Variance
Revenues:						
Ethanol production:						
Revenues from external customers	$ 573,399	$ 620,180	(7.5%)	$ 1,726,418	$ 1,857,356	(7.0%)
Intersegment revenues	3,113	3,579	(13.0)	9,285	6,624	40.2
Total segment revenues	576,512	623,759	(7.6)	1,735,703	1,863,980	(6.9)
Agribusiness and energy services:						
Revenues from external customers	174,290	164,604	5.9	546,151	483,670	12.9
Intersegment revenues	12,692	14,406	(11.9)	38,249	33,679	13.6
Total segment revenues	186,982	179,010	4.5	584,400	517,349	13.0
Food and ingredients:						
Revenues from external customers	251,113	114,750	118.8	755,109	329,432	129.2
Intersegment revenues	38	38	-	118	113	4.4
Total segment revenues	251,151	114,788	118.8	755,227	329,545	129.2
Partnership:						
Revenues from external customers	1,298	1,701	(23.7)	4,546	4,724	(3.8)
Intersegment revenues	24,472	24,748	(1.1)	72,949	74,019	(1.4)
Total segment revenues	25,770	26,449	(2.6)	77,495	78,743	(1.6)
Revenues including intersegment activity	1,040,415	944,006	10.2	3,152,825	2,789,617	13.0
Intersegment eliminations	(40,315)	(42,771)	(5.7)	(120,601)	(114,435)	5.4
Revenues as reported	$ 1,000,100	$ 901,235	11.0%	$ 3,032,224	$ 2,675,182	13.3%

	Three Months Ended September 30,		%	Nine Months Ended September 30,		%
	2018	2017	Variance	2018	2017	Variance
Cost of goods sold:						
Ethanol production	$ 560,719	$ 590,904	(5.1%)	$ 1,706,891	$ 1,802,688	(5.3%)
Agribusiness and energy services	179,432	168,735	6.3	546,318	487,239	12.1
Food and ingredients	236,150	98,854	138.9	702,355	281,898	149.2
Partnership	-	-	*	-	-	*
Intersegment eliminations	(39,917)	(42,706)	(6.5)	(120,220)	(114,123)	5.3
	$ 936,384	$ 815,787	14.8%	$ 2,835,344	$ 2,457,702	15.4%

	Three Months Ended September 30,		%	Nine Months Ended September 30,		%
	2018	2017	Variance	2018	2017	Variance
Operating income (loss):						
Ethanol production	$ (15,961)	$ 3,107	*	$ (60,704)	$ (25,950)	(133.9%)
Agribusiness and energy services	2,851	3,686	(22.7)	22,081	13,138	68.1
Food and ingredients	8,324	10,132	(17.8)	33,890	30,472	11.2
Partnership	16,725	16,290	2.7	48,214	47,707	1.1
Intersegment eliminations	(325)	8	*	(113)	(147)	23.1
Corporate activities	(10,965)	(12,507)	12.3	(34,879)	(30,898)	(12.9)
	$ 649	$ 20,716	(96.9%)	$ 8,489	$ 34,322	(75.3%)

	Three Months Ended September 30,		%	Nine Months Ended September 30,		%
	2018	2017	Variance	2018	2017	Variance
EBITDA:						
Ethanol production	$ 8,475	$ 25,570	(66.9%)	$ 4,742	$ 38,521	(87.7%)
Agribusiness and energy services	3,537	5,150	(31.3)	24,035	15,910	51.1
Food and ingredients	12,151	13,272	(8.4)	47,192	39,741	18.7
Partnership	17,913	17,589	1.8	51,674	51,549	0.2
Intersegment eliminations	(325)	8	*	(113)	(147)	23.1
Corporate activities	(9,716)	(11,212)	13.3	(30,533)	(27,275)	(11.9)
	$ 32,035	$ 50,377	(36.4%)	$ 96,997	$ 118,299	(18.0%)

* Percentage variance not considered meaningful.

We use EBITDA as a segment measure of profitability to compare the financial performance of our reportable segments and manage those segments. We believe EBITDA is a useful measure to compare our performance against other companies. EBITDA should not be considered an alternative to, or more meaningful than, net income, which is prepared in accordance with GAAP. EBITDA calculations may vary from company to company. Accordingly, our computation of EBITDA may not be comparable with a similarly titled measure of other companies.

The following table reconciles net income (loss) to EBITDA for the periods indicated (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income (loss)	$ (7,419)	$ 39,429	$ (23,123)	$ 29,284
Interest expense	23,399	31,889	67,548	69,815
Income tax benefit	(14,658)	(48,775)	(31,438)	(60,905)
Depreciation and amortization	30,713	27,834	84,010	80,105
EBITDA	$ 32,035	$ 50,377	$ 96,997	$ 118,299

Three Months Ended September 30, 2018, Compared with the Three Months Ended September 30, 2017

Consolidated Results

Consolidated revenues increased $98.9 million for the three months ended September 30, 2018, compared with the same period in 2017 primarily as a result of the acquisitions of cattle feeding operations in 2018 and 2017 and higher average realized prices for distillers grains, partially offset by a decrease in ethanol production and trading activity.

Operating income decreased $20.1 million and EBITDA decreased $18.3 million for the three months ended September 30, 2018 compared with the same period last year primarily due to the compression of ethanol production margins. Interest expense decreased $8.5 million for the three months ended September 30, 2018, compared with the same period in 2017, primarily due to higher expense associated with the termination of previous credit facilities during the three months ended September 30, 2017. Income tax benefit was $14.7 million for the three months ended September 30, 2018, compared with $48.8 million for the same period in 2017 due to additional tax benefits related to R&D Credits recognized for all open tax years during the three months ended September 30, 2017.

The following discussion provides greater detail about our third quarter segment performance.

Ethanol Production Segment

Key operating data for our ethanol production segment is as follows:

	Three Months Ended

	September 30,		
	2018	2017	% Variance
Ethanol produced (thousands of gallons)	304,826	313,642	(2.8)
Distillers grains produced (thousands of equivalent dried tons)	811	817	(0.7)
Corn oil produced (thousands of pounds)	78,304	75,440	3.8
Corn consumed (thousands of bushels)	105,965	109,544	(3.3)

Revenues in our ethanol production segment decreased $47.2 million for the three months ended September 30, 2018, compared with the same period in 2017 primarily due to lower volumes of ethanol and distillers grains produced in addition to lower average ethanol prices realized, partially offset by higher average distillers grains prices realized.

Cost of goods sold for our ethanol production segment decreased $30.2 million for the three months ended September 30, 2018, compared with the same period last year due to decreased volumes sold offset by higher corn prices. As a result of the factors identified above, operating income decreased $19.1 million and EBITDA decreased $17.1 million for the three months ended September 30, 2018, compared with the same period in 2017. Depreciation and amortization expense for the segment was $24.3 million for the three months ended September 30, 2018, compared with $21.0 million for the same period last year primarily due to accelerated depreciation associated with fixed asset disposals during the three months ended September 30, 2018.

Agribusiness and Energy Services Segment

Revenues in our agribusiness and energy services segment increased $8.0 million while operating income decreased $0.8 million and EBITDA decreased by $1.6 million for the three months ended September 30, 2018, compared with the same period in 2017. The increase in revenues was primarily due to higher average realized prices for distillers grains, partially offset by a decrease in ethanol production and trading activity. Operating income and EBITDA decreased primarily as a result of decreased trading activity margins.

Food and Ingredients Segment

Revenues in our food and ingredients segment increased $136.4 million for the three months ended September 30, 2018, compared with the same period in 2017. The increase in revenues was primarily due to an increase in cattle volumes sold as a

result of the acquisitions of cattle feeding operations during 2017 and 2018. Cattle head sold for the three months ended September 30, 2018, and 2017 was approximately 147,000 and 48,000, respectively.

Operating income decreased by $1.8 million and EBITDA decreased $1.1 million for the three months ended September 30, 2018, compared with the same period in 2017 primarily due to a decrease in cattle margins.

Partnership Segment

Revenues generated by our partnership segment decreased $0.7 million for the three months ended September 30, 2018, compared to the same period of 2017, due to lower revenues generated from our rail transportation services and terminal services, offset by an increase in revenues generated from trucking services and storage and throughput services. Operating income increased $0.4 million and EBITDA increased $0.3 million for the three months ended September 30, 2018, compared with the same period in 2017 primarily due to lower railcar lease expense associated with our terminal operations.

Intersegment Eliminations

Intersegment eliminations of revenues decreased by $2.5 million for the three months ended September 30, 2018, compared with the same period in 2017 due to decreased intersegment corn purchases within the agribusiness and energy services segment as well as decreased intersegment distillers grain revenues within the ethanol production segment, both primarily due to decreased sales to the food and ingredients segment for cattle feed.

Corporate Activities

Operating income was impacted by a decrease in operating expenses for corporate activities of $1.5 million for the three months ended September 30, 2018, compared with the same period in 2017 primarily due to decreased selling, general and administrative expenses related to personnel costs in 2018.

Income Taxes

We recorded income tax benefit of $14.7 million for the three months ended September 30, 2018, compared with $48.8 million for the same period in 2017. The decrease in income tax benefit was due primarily to the company's recognition of a net tax benefit of $10.1 million during the three months ended September 30, 2018, compared to a net tax benefit of $49.5 million during the same period in 2017, for federal and state R&D Credits relating to current and prior periods.

Nine Months Ended September 30, 2018, Compared with the Nine Months Ended September 30, 2017

Consolidated Results

Consolidated revenues increased $357.0 million for the nine months ended September 30, 2018, compared with the same period in 2017, primarily as a result of the acquisitions of cattle feeding operations at the end of the first quarter and at the beginning of the second quarter of 2017 and in the third quarter of 2018. The increase was also driven by higher average realized prices for distillers grains and additional natural gas volumes sold, partially offset by a decrease in volumes for ethanol and distillers grains and lower average realized prices for ethanol and corn oil.

Operating income decreased $25.8 million and EBITDA decreased $21.3 million for the nine months ended September 30, 2018, compared with the same period last year primarily due to decreased margins in our ethanol production segment. Interest expense decreased $2.3 million for the nine months ended September 30, 2018, compared with the same period in 2017, primarily due to higher expense associated with the termination of previous credit facilities during the nine months ended September 30, 2017, partially offset by higher average debt outstanding and higher borrowing costs during the nine months ended September 30, 2018. Income tax benefit was $31.4 million for the nine months ended September 30, 2018, compared with $60.9 million for the same period in 2017 due to additional tax benefits related to R&D Credits recognized for all open tax years during the nine months ended September 30, 2017.

The following discussion provides greater detail about our year to date segment performance.

Ethanol Production Segment

Key operating data for our ethanol production segment is as follows:

	Nine Months Ended September 30,		
	2018	2017	% Variance
Ethanol produced (thousands of gallons)	881,518	915,607	(3.7)
Distillers grains produced (thousands of equivalent dried tons)	2,279	2,421	(5.9)
Corn oil produced (thousands of pounds)	222,994	216,482	3.0
Corn consumed (thousands of bushels)	306,395	318,709	(3.9)

Revenues in our ethanol production segment decreased $128.3 million for the nine months ended September 30, 2018, compared with the same period in 2017 primarily due to lower volumes of ethanol and distillers grains sold in addition to lower average ethanol and corn oil prices realized, partially offset by higher average distillers grains prices realized.

Cost of goods sold for our ethanol production segment decreased $95.8 million for the nine months ended September 30, 2018, compared with the same period last year due to lower production volumes and lower corn prices. As a result of the factors identified above, operating income decreased $34.8 million and EBITDA decreased $33.8 million for the nine months ended September 30, 2018, compared with the same period in 2017. Depreciation and amortization expense for the segment was $65.3 million for the nine months ended September 30, 2018, compared with $61.4 million for the same period last year primarily due to accelerated depreciation associated with fixed asset disposals during the nine months ended September 30, 2018.

Agribusiness and Energy Services Segment

Revenues in our agribusiness and energy services segment increased $67.1 million while operating income increased $8.9 million and EBITDA increased by $8.1 million for the nine months ended September 30, 2018, compared with the same period in 2017. The increase in revenues was primarily due to an increase in ethanol and natural gas trading activity, partially offset by lower average realized prices for corn oil. Operating income and EBITDA increased primarily as a result of increased trading activity margins.

Food and Ingredients Segment

Revenues in our food and ingredients segment increased $425.7 million for the nine months ended September 30, 2018, compared with the same period in 2017. The increase in revenues was primarily due to an increase in cattle volumes sold as a result of the acquisitions of cattle feeding operations during the first and second quarters of 2017 and in the third quarter of 2018. Cattle head sold for the nine months ended September 30, 2018, and 2017, was approximately 402,000 and 128,000, respectively.

Operating income increased by $3.4 million and EBITDA increased $7.5 million for the nine months ended September 30, 2018, compared with the same period in 2017 primarily due to the increase in cattle volumes outlined above. During the nine months ended September 30, 2018, the company recognized a gain within other income of $4.5 million related to business interruption and property insurance proceeds received in excess of the book value of certain fixed assets that were damaged at the Hereford cattle feed yard.

Partnership Segment

Revenues generated by our partnership segment decreased $1.2 million for the nine months ended September 30, 2018, compared to the same period of 2017, due to lower revenues generated from our rail transportation and terminal services, offset by an increase in trucking service and storage and throughput services. Operating income increased $0.5 million for the nine months ended September 30, 2018, compared with the same period in 2017 primarily due to a decrease in railcar lease

expense and unloading fees, partially offset by increased wages, fuel and other expenses. EBITDA increased $0.1 million for the nine months ended September 30, 2018, compared with the same period in 2017.

Intersegment Eliminations

Intersegment eliminations of revenues increased by $6.2 million for the nine months ended September 30, 2018, compared with the same period in 2017 due to increased intersegment corn purchases within the agribusiness and energy services segment as well as increased intersegment distillers grain revenues within the ethanol production segment, both primarily due to increased sales to the food and ingredients segment for cattle feed.

Corporate Activities

Operating income was impacted by an increase in operating expenses for corporate activities of $4.0 million for the nine months ended September 30, 2018, compared with the same period in 2017 primarily due to increased selling, general and administrative expenses related to personnel costs in 2018.

Income Taxes

We recorded income tax benefit of $31.4 million for the nine months ended September 30, 2018, compared with $60.9 million for the same period in 2017. The decrease in income tax benefit was due primarily to the company’s recognition of a net tax benefit of $18.4 million during the nine months ended September 30, 2018, compared to $49.5 million during the same period in 2017, for federal and state R&D Credits relating to current and prior periods.

Liquidity and Capital Resources

Our principal sources of liquidity include cash generated from operating activities and bank credit facilities. We fund our operating expenses and service debt primarily with operating cash flows. Capital resources for maintenance and growth expenditures are funded by a variety of sources, including cash generated from operating activities, borrowings under bank credit facilities, or issuance of senior notes or equity. Our ability to access capital markets for debt under reasonable terms depends on our financial condition, credit ratings and market conditions. We believe that our ability to obtain financing at reasonable rates and history of consistent cash flow from operating activities provide a solid foundation to meet our future liquidity and capital resource requirements.

On September 30, 2018, we had $171.7 million in cash and equivalents, excluding restricted cash, consisting of $155.6 million held at our parent company and the remainder held at our subsidiaries. Additionally, we had $62.8 million in restricted cash at September 30, 2018. We also had $491.6 million available under our revolving credit agreements, some of which were subject to restrictions or other lending conditions. Funds at certain subsidiaries are generally required for their ongoing operational needs and restricted from distribution. At September 30, 2018, our subsidiaries had approximately $171.2 million of net assets that were not available to us in the form of dividends, loans or advances due to restrictions contained in their credit facilities. As a result of the $500 million term loan agreement and related debt extinguishment at Green Plains Processing and Fleischmann's Vinegar, we no longer consider certain subsidiaries to have restrictions on cash and asset distributions.

Net cash provided by operating activities was $84.4 million for the nine months ended September 30, 2018, compared with $114.2 million used for the same period in 2017. Operating activities compared to the prior year were primarily affected by decreases in cash spent on cattle inventory offset by decreases in operating income when compared to the same period of the prior year. Net cash used in investing activities was $150.5 million for the nine months ended September 30, 2018, compared to $110.2 million for the same period in 2017, with the increase due primarily to the acquisition of cattle feed operations during the current year, partially offset by cash received from other investing activities. Net cash used in financing activities was $11.8 million for the nine months ended September 30, 2018, compared with net cash provided by financing activities of $164.3 million for the same period in 2017, with the increase in cash used resulting from lower net short-term borrowings.

Additionally, Green Plains Trade, Green Plains Cattle and Green Plains Grain use revolving credit facilities to finance working capital requirements. We frequently draw from and repay these facilities which results in significant cash movements reflected on a gross basis within financing activities as proceeds from and payments on short-term borrowings.

We incurred capital expenditures of $31.1 million in the first nine months of 2018 for various maintenance and expansion projects. Capital spending for the remainder of 2018 is expected to be approximately $4 million for various

projects, which are expected to be financed with cash provided by operating activities and available borrowings under our credit facilities.

Our business is highly sensitive to the price of commodities, particularly for corn, ethanol, distillers grains, corn oil, natural gas and cattle. We use derivative financial instruments to reduce the market risk associated with fluctuations in commodity prices. Sudden changes in commodity prices may require cash deposits with brokers for margin calls or significant liquidity with little advanced notice to meet margin calls, depending on our open derivative positions. We continuously monitor our exposure to margin calls and believe we will continue to maintain adequate liquidity to cover margin calls from our operating results and borrowings.

We have paid a quarterly cash dividend since August 2013, and anticipate declaring a cash dividend in future quarters on a regular basis. Future declarations of dividends, however, are subject to board approval and may be adjusted as our liquidity, business needs or market conditions change. On August 15, 2018, our board of directors declared a quarterly cash dividend of $0.12 per share. The dividend was paid on September 14, 2018, to shareholders of record at the close of business on August 27, 2018.

For each calendar quarter commencing with the quarter ended September 30, 2015, the partnership agreement requires the partnership to distribute all available cash, as defined, to its partners, including us, within 45 days after the end of each calendar quarter. Available cash generally means all cash and cash equivalents on hand at the end of that quarter less cash reserves established by our general partner plus all or any portion of the cash on hand resulting from working capital borrowings made subsequent to the end of that quarter. On October 18, 2018, the board of directors of the general partner of the partnership declared a cash distribution of $0.475 per unit on outstanding common units. The distribution is payable on November 9, 2018, to unitholders of record at the close of business on November 2, 2018.

In August 2014, we announced a share repurchase program of up to $100 million of our common stock. Under the program, we may repurchase shares in open market transactions, privately negotiated transactions, accelerated share buyback programs, tender offers or by other means. The timing and amount of repurchase transactions are determined by our management based on market conditions, share price, legal requirements and other factors. The program may be suspended, modified or discontinued at any time without prior notice. We did not repurchase any shares during the third quarter of 2018 due to certain restrictions under the term loan agreement. To date, we have repurchased 909,667 shares of common stock for approximately $16.7 million under the program.

We believe we have sufficient working capital for our existing operations. Furthermore, our liquidity position has improved subsequent to September 30, 2018, as a result of the recently announced sale of three of our ethanol plants located in Bluffton, Indiana, Lakota, Iowa, and Riga, Michigan as well as the sale of Fleischmann’s Vinegar Company. We anticipate that the net cash proceeds from the sales, net of fees and taxes, will be approximately $645 million, which we expect will be used to pay off the outstanding term loan balance. For additional information related to the subsequent sales, see Note 16 – Subsequent Events included as part of the notes to consolidated financial statements. A sustained period of unprofitable operations, however, may strain our liquidity, making it difficult to maintain

compliance with our financing arrangements. We may sell additional equity or borrow capital to improve or preserve our liquidity, expand our business or build additional or acquire existing businesses. We cannot provide assurance that we will be able to secure funding necessary for additional working capital or these projects at reasonable terms, if at all.

Debt

For additional information related to our debt, see Note 9 – Debt and Note 16 – Subsequent Events included as part of the notes to consolidated financial statements and Note 11 – Debt included as part of the notes to consolidated financial statements included in our annual report on Form 10-K for the year ended December 31, 2017.

We were in compliance with our debt covenants at September 30, 2018. Based on our forecasts, we believe we will maintain compliance at each of our subsidiaries for the next twelve months or have sufficient liquidity available on a consolidated basis to resolve noncompliance. We cannot provide assurance that actual results will approximate our forecasts or that we will inject the necessary capital into a subsidiary to maintain compliance with its respective covenants. In the event a subsidiary is unable to comply with its debt covenants, the subsidiary's lenders may determine that an event of default has occurred, and following notice, the lenders may terminate the commitment and declare the unpaid balance due and payable.

Corporate Activities

On August 29, 2017, the company and substantially all of the company's subsidiaries, but not including Green Plains Partners and certain other entities as guarantors, entered into a $500.0 million term loan agreement with BNP Paribas, as administrative agent and collateral agent and certain other financial institutions, which matures on August 29, 2023, and may be prepaid at any time without premium or penalty other than customary breakage costs with respect to Eurodollar-based loans or certain other limited circumstances in which event a 1.0% prepayment premium would be due.

The term loan agreement requires principal payments of $1.25 million on the last day of each quarter, beginning on December 31, 2017, with a final installment payable on August 29, 2023, equal to the unpaid principal and interest balances of the term loan agreement. Beginning in 2018, the credit facility also has a provision requiring the company to make special annual payments of 50% or 75% of its available free cash flow, subject to certain limitations. The term loan bears interest at a floating rate of a base rate plus a margin of 4.50% or LIBOR plus a margin of 5.50%.

The term loan agreement is guaranteed by the company and the term loan obligors, and secured by substantially all of the assets of the company and the term loan obligors, including 17 ethanol production facilities with annual capacity of approximately 1.5 billion gallons, as well as the vinegar production facilities.

The term loan agreement provides for customary events of default, which include (subject in certain cases to customary grace and cure periods), among others, the following: nonpayment of principal or interest; breach of covenants or other agreements in the term loan agreement; defaults in failure to pay certain other indebtedness; and certain events of bankruptcy or insolvency. If any event of default occurs, the remaining principal balance and accrued interest on the term loan agreement will become immediately due and payable.

In September 2013, we issued $120.0 million of 3.25% convertible senior notes due in 2018, or 3.25% notes, which are senior, unsecured obligations with interest payable on April 1 and October 1 of each year. Prior to April 1, 2018, the 3.25% notes were not convertible unless certain conditions are satisfied. The conversion rate is subject to adjustment upon the occurrence of certain events, including when the quarterly cash dividend exceeds $0.04 per share. The conversion rate was recently adjusted as of September 30, 2018, to 50.8753 shares of common stock per $1,000 of principal, which is equal to a conversion price of approximately $19.66 per share. We may settle the 3.25% notes in cash, common stock or a combination of cash and common stock. For all conversions of notes which occur on or after April 1, 2018, the company elected to convert for whole shares of common stock with any fractional share being settled with cash in lieu.

During fiscal year 2017, approximately $56.3 million in aggregate principal of the 3.25% notes were exchanged for cash and 2,783,725 shares of the company's common stock. During the three months ended June 30, 2018, an

additional 50 shares of the company's common stock were exchanged for approximately $1 thousand in aggregate principal amount of the 3.25% notes.

During the three months ended September 30, 2018, the company entered into exchange agreements with certain beneficial owners of the company's outstanding 3.25% convertible senior notes due 2018 (the "Old Notes"), pursuant to which such Investors exchanged (the "Exchange") $56.8 million in aggregate principal amount of the Old Notes for $56.8 million in aggregate principal amount of notes due 2019 (the "New Notes"). The company evaluated the Exchange in accordance with ASC 470-50 and concluded that the Exchange qualified as a debt modification as the cash flows and fair value of the embedded conversion option of the New Notes were not substantially different from the Old Notes. As a result, the New Notes were recorded at fair value at the time of the exchange, and the company recorded a non-cash adjustment to additional paid-in capital of $4.7 million related to the difference in fair value of the embedded conversion option of the Old Notes and the New Notes. Following the closing of these agreements, $6.9 million aggregate principal of the Old Notes remain outstanding. On October 1, 2018, the maturity date of the Old Notes, the remaining aggregate principal of $6.9 million was paid.

The New Notes are the senior, unsecured obligations of the company and bear interest at a rate of 3.25% per annum, payable semi-annually in arrears on April 1 and October 1 of each year, beginning on October 1, 2018. Interest on the New Notes will accrue from, and including, April 1, 2018. The New Notes will mature on October 1, 2019, unless earlier converted. Holders of New Notes may convert their New Notes, at their option, in integral multiples of $1,000 principal amount, at any time prior to the close of business on the scheduled trading day immediately preceding the maturity date of the New Notes. The conversion rate for the New Notes will initially be 50.6481 shares of the company's common stock per $1,000 principal amount of New Notes, which corresponds to an initial conversion price of approximately $19.74 per share of the company's common stock. The conversion rate will be subject to adjustment upon the occurrence of certain events.

Upon conversion of the convertible notes, the company will settle its conversion obligation by delivering shares of its common stock at the applicable conversion rate, together with cash in lieu of any fractional share.

The company does not have the right to redeem the New Notes at its election before their maturity. The New Notes are subject to customary provisions providing for the acceleration of their principal and interest upon the occurrence of events that constitute an "event of default." Events of default include, among other events, certain payment defaults, defaults in settling conversions, certain defaults under the company's other indebtedness and certain insolvency-related events. Upon maturity, the company will settle the New Notes in cash.

In August 2016, we issued $170.0 million of 4.125% convertible senior notes due in 2022, or 4.125% notes, which are senior, unsecured obligations with interest payable on March 1 and September 1 of each year. Prior to March 1, 2022, the 4.125% notes are not convertible unless certain conditions are satisfied. The initial conversion rate is 35.7143 shares of common stock per $1,000 of principal which is equal to a conversion price of approximately $28.00 per share. The conversion rate is subject to adjustment upon the occurrence of certain events, including when the quarterly cash dividend exceeds $0.12 per share. We may settle the 4.125% notes in cash, common stock or a combination of cash and common stock.

Ethanol Production Segment

We have small equipment financing loans, capital leases on equipment or facilities, and other forms of debt financing.

Agribusiness and Energy Services Segment

Green Plains Grain has a $125.0 million senior secured asset-based revolving credit facility to finance working capital up to the maximum commitment based on eligible collateral, which matures in July of 2019. This facility can be increased by up to $75.0 million with agent approval and up to $50.0 million for seasonal borrowings. Total commitments outstanding under the facility cannot exceed $250.0 million. At September 30, 2018, the outstanding principal balance was $30.0 million on the facility and our interest rate was 5.25%.

Green Plains Trade has a $300.0 million senior secured asset-based revolving credit facility to finance working capital up to the maximum commitment based on eligible collateral, which matures in July of 2022. This facility can be increased by up to $70.0 million with agent approval. Advances are subject to variable interest rates equal to a daily LIBOR rate plus 2.25% or the base rate plus 1.25%. The unused portion of the credit facility is also subject to a commitment fee of 0.375% per annum. At September 30, 2018, the outstanding principal balance was $133.7 million on the facility and the interest rate was 4.26%.

Green Plains Commodity Management has an uncommitted $20.0 million revolving credit facility which matures April 30, 2023 to finance margins related to its hedging programs. Advances are subject to variable interest rates equal to LIBOR plus 1.75%. At September 30, 2018, the outstanding principal balance was $12.1 million on the facility and the interest rate was 3.95%.

Green Plains Grain has entered into short-term inventory financing agreements with a financial institution. At September 30, 2018, 1.0 million bushels of corn had been designated as collateral under these agreements at initial values totaling $4.2 million. The company has accounted for the agreements as short-term notes, rather than sales, and has elected the fair value option to offset fluctuations in market prices of the inventory. At September 30, 2018, the short-term notes payable were valued at $4.0 million and our interest rate was 4.68%.

Food and Ingredients Segment

Green Plains Cattle has a $500.0 million senior secured asset-based revolving credit facility to finance working capital up to the maximum commitment based on eligible collateral, which matures in April of 2020. This facility can be increased by up to $100.0 million with agent approval and includes a swing-line sublimit of $20.0 million. On July 31, 2018, the company amended the credit facility, to increase the maximum commitment from $425.0 million to $500.0 million. At September 30, 2018, the outstanding principal balance was $376.7 million on the facility and our interest rate was 4.28%.

Advances under the revolving credit facility, as amended, are subject to variable interest rates equal to LIBOR plus 2.0% to 3.0% or the base rate plus 1.0% to 2.0%, depending on the preceding three months' excess borrowing availability. The unused portion of the credit facility is also subject to a commitment fee of 0.20% to 0.30% per annum, depending on the

preceding three months' excess borrowing availability. Interest is payable as required, but not less than quarterly in arrears and principal is due upon maturity.

Partnership Segment

Green Plains Partners, through a wholly owned subsidiary, has a $235.0 million revolving credit facility, which matures on July 1, 2020, to fund working capital, acquisitions, distributions, capital expenditures and other general partnership purposes. On February 20, 2018, the partnership accessed a portion of its available accordion to increase the revolving credit facility by $40.0 million, from $195.0 million to $235.0 million. The credit facility can be increased by an additional $20.0 million without the consent of the lenders. At September 30, 2018, the outstanding principal balance was $128.0 million on the facility and had an average interest rate of 4.74%.

Contractual Obligations

Contractual obligations as of September 30, 2018, were as follows (in thousands):

	Payments Due By Period				
Contractual Obligations	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Long-term and short-term debt obligations (1)	$ 1,435,128	$ 622,198	$ 140,168	$ 180,797	$ 491,965
Interest and fees on debt obligations (2)	244,039	75,720	87,763	72,262	8,294
Operating lease obligations (3)	103,920	26,836	33,498	13,510	30,076
Other	13,673	812	8,548	2,428	1,885
Purchase obligations:					
Forward grain purchase contracts (4)	240,753	235,746	2,840	2,000	167
Other commodity purchase contracts (5)	171,165	163,436	7,008	721	-
Other	273	64	209	-	-
Total contractual obligations	$ 2,208,951	$ 1,124,812	$ 280,034	$ 271,718	$ 532,387

(1) Includes the current portion of long-term debt and excludes the effect of any debt discounts and issuance costs.
(2) Interest amounts are calculated over the terms of the loans using current interest rates, assuming scheduled principal and interest amounts are paid pursuant to the debt agreements. Includes administrative and/or commitment fees on debt obligations.
(3) Operating lease costs are primarily for railcars and office space.
(4) Purchase contracts represent index-priced and fixed-price contracts. Index purchase contracts are valued at current quarter-end prices.
(5) Includes fixed-price ethanol, dried distillers grains and natural gas purchase contracts.

Critical Accounting Policies and Estimates

Key accounting policies, including those relating to revenue recognition, depreciation of property and equipment, asset retirement obligations, impairment of long-lived assets and goodwill, derivative financial instruments, and accounting for income taxes, are impacted significantly by judgments, assumptions and estimates used in the preparation of the consolidated financial statements. Information about our critical accounting policies and estimates are included in our annual report on Form 10-K for the year ended December 31, 2017.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements other than the operating leases, which are entered into during the ordinary course of business and disclosed in the Contractual Obligations section above.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We use various financial instruments to manage and reduce our exposure to various market risks, including changes in commodity prices and interest rates. We conduct all of our business in U.S. dollars and are not currently exposed to foreign currency risk.

Interest Rate Risk

We are exposed to interest rate risk through our loans which bear interest at variable rates. Interest rates on our variable-rate debt are based on the market rate for the lender's prime rate or LIBOR. A 10% increase in interest rates would affect our interest cost by approximately $6.4 million per year. At September 30, 2018, we had $1.4 billion in debt, $1.2 billion of which had variable interest rates.

For additional information related to our debt, see Note 9 – Debt included as part of the notes to consolidated financial statements and Note 11 – Debt included as part of the notes to consolidated financial statements included in our annual report on Form 10-K for the year ended December 31, 2017.

Commodity Price Risk

Our business is highly sensitive to commodity price risk, particularly for corn, corn oil, natural gas, ethanol, distillers grains and cattle. Corn prices are affected by weather conditions, yield, changes in domestic and global supply and demand, and government programs and policies. Natural gas prices are influenced by severe weather in the summer and winter and hurricanes in the spring, summer and fall. Other factors include North American energy exploration and production, and the amount of natural gas in underground storage during injection and withdrawal seasons. Ethanol prices are sensitive to world crude oil supply and demand, the price of crude oil, gasoline and corn, the price of substitute fuels, refining capacity and utilization, government regulation and consumer demand for alternative fuels. Distillers grains prices are impacted by livestock numbers on feed, prices for feed alternatives and supply, which is associated with ethanol plant production. Cattle prices are impacted by weather conditions, overall economic conditions and government regulations.

To reduce the risk associated with fluctuations in the price of corn, natural gas, ethanol, distillers grains, corn oil and cattle, at times we use forward fixed-price physical contracts and derivative financial instruments, such as futures and options executed on the Chicago Board of Trade, the New York Mercantile Exchange and the Chicago Mercantile Exchange. We focus on locking in favorable operating margins, when available, using a model that continually monitors market prices for corn, natural gas and other inputs relative to the price for ethanol and distillers grains at each of our production facilities. We create offsetting positions using a combination of forward fixed-price purchases, sales contracts and derivative financial instruments. As a result, we frequently have gains on derivative financial instruments that are offset by losses on forward fixed-price physical contracts or inventories and vice versa. Our results are impacted by a mismatch of gains or losses associated with the derivative instrument during a reporting period when the physical commodity purchases or sale has not yet occurred. During the three and nine months ended September 30, 2018, revenues included net gains of $5.3 million and $4.1 million, respectively, and cost of goods sold included net gains of $12.1 million and $3.5 million, respectively, associated with derivative financial instruments.

Ethanol Production Segment

In the ethanol production segment, net gains and losses from settled derivative instruments are offset by physical commodity purchases or sales to achieve the intended operating margins. To reduce commodity price risk caused by market fluctuations, we enter into exchange-traded futures and options contracts that serve as economic hedges.

Our exposure to market risk, which includes the impact of our risk management activities resulting from our fixed-price purchase and sale contracts and derivatives, is based on the estimated net income effect resulting from a hypothetical 10% change in price for the next 12 months starting on September 30, 2018, are as follows (in thousands):

Commodity	Estimated Total Volume Requirements for the Next 12 Months (1)	Unit of Measure	Net Income Effect of Approximate 10% Change in Price
Ethanol	1,470,000	Gallons	$ 165,213
Corn	518,000	Bushels	$ 153,112
Distillers grains	4,100	Tons (2)	$ 39,244
Corn oil	359,000	Pounds	$ 7,053
Natural gas	41,700	MmBTU	$ 6,154

(1) Estimated assumes production at full capacity, including the Bluffton, Lakota and Riga plants discussed in Note 16 – Subsequent Events.

(2) Distillers grains quantities are stated on an equivalent dried ton basis.

Agribusiness and Energy Services Segment

In the agribusiness and energy services segment, our inventories, physical purchase and sale contracts and derivatives are marked to market. To reduce commodity price risk caused by market fluctuations for purchase and sale commitments of grain and grain held in inventory, we enter into exchange-traded futures and options contracts that serve as economic hedges.

The market value of exchange-traded futures and options used for hedging are highly correlated with the underlying market value of grain inventories and related purchase and sale contracts for grain. The less correlated portion of inventory and purchase and sale contract market values, known as basis, is much less volatile than the overall market value of exchange-traded futures and tends to follow historical patterns. We manage this less volatile risk by constantly monitoring our position relative to the price changes in the market. Inventory values are affected by the month-to-month spread in the futures markets. These spreads are also less volatile than overall market value of our inventory and tend to follow historical patterns, but cannot be mitigated directly. Our accounting policy for futures and options, as well as the underlying inventory held for sale and purchase and sale contracts, is to reflect their current market values and include gains and losses in the consolidated statement of operations.

Our daily net commodity position consists of inventories related to purchase and sale contracts and exchange-traded contracts. The fair value of our position was approximately $0.5 million for grain based on market prices at September 30, 2018. Our market risk at that date, based on the estimated net income effect resulting from a hypothetical 10% change in price, was approximately $43 thousand.

Food and Ingredients Segment

In the food and ingredients segment, our physical cattle purchase and sale contracts and derivatives are marked to market. To reduce commodity price risk caused by market fluctuations for purchase and sale commitments of cattle, we enter into exchange-traded futures and options contracts that serve as economic hedges.

The market value of exchange-traded futures and options used for hedging are highly correlated with the underlying market value of purchase and sale contracts for cattle. The less correlated portion of inventory and purchase and sale contract market values, known as basis, is much less volatile than the overall market value of exchange-traded futures and tends to follow historical patterns. We manage this less volatile risk by constantly monitoring our position relative to the price changes in the market. Inventory values are affected by the month-to-month spread in the futures markets. These spreads are also less volatile than overall market value of our inventory and tend to follow historical patterns, but cannot be mitigated directly. Our accounting policy for futures and options, as well as the underlying inventory held for sale and purchase and sale contracts, is to reflect their current market values and include gains and losses in the consolidated statement of operations.

Our daily net commodity position consists of inventories related to purchase and sale contracts and exchange-traded contracts. The fair value of our position was approximately $5.6 million for cattle at September 30, 2018. Our market risk at that date, based on the estimated net income effect resulting from a hypothetical 10% change in price, was approximately $0.4 million.

Our daily net commodity position consists of inventories related to purchase and sale contracts and exchange-traded contracts. The fair value of our position was approximately $14.3 million for grain and other cattle feed at September 30, 2018. Our market risk at that date, based on the estimated net income effect resulting from a hypothetical 10% change in price, was approximately $1.1 million.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to ensure information that must be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, as appropriate, to allow timely decisions regarding required financial disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and participation of our chief executive officer and chief financial officer, management carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of September 30, 2018, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act and concluded that our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

Management is responsible for establishing and maintaining effective internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with U.S. generally accepted accounting principles. There were no material changes in our internal control over financial reporting that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings.

We are currently involved in litigation that has arisen during the ordinary course of business. We do not believe this litigation will have a material adverse effect on our financial position, results of operations or cash flows.

Item 1A. Risk Factors.

Investors should carefully consider the discussion of risks and the other information in our annual report on Form 10-K for the year ended December 31, 2017, in Part I, Item 1A, “Risk Factors,” and the discussion of risks and other information in Part I, Item 2, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” under “Cautionary Information Regarding Forward-Looking Statements,” of this report. Investors should also carefully consider the discussion of risks with the partnership under the heading “Risk Factors” and other information in their annual report on Form 10-K for the year ended December 31, 2017. Although we have attempted to discuss key factors, our investors need to be aware that other risks may prove to be important in the future. New risks may emerge at any time and we cannot predict such risks or estimate the extent to which they may affect our financial performance. The following risk factor supplements and/or updates risk factors previously disclosed and should be considered in conjunction with the other information included in, or incorporated by reference in, this quarterly report on Form 10-Q.

Government mandates affecting ethanol usage could change and impact the ethanol market.

Under the provisions of the EISA, Congress established a mandate setting the minimum volume of renewable fuels that must be blended with gasoline under the RFS II, which affects the domestic market for ethanol. The EPA has the authority to waive the requirements, in whole or in part, if there is inadequate domestic renewable fuel supply or the requirement severely harms the economy or the environment. After 2022, volumes shall be determined by the EPA in coordination with the Secretaries of Energy and Agriculture, taking into account such factors as impact on environment, energy security, future rates of production, cost to consumers, infrastructure, and other factors such as impact on commodity prices, job creation, rural economic development, or impact on food prices.

Our operations could be adversely impacted by legislation or EPA actions, as set forth below or otherwise, that may reduce the RFS II mandate. Similarly, should federal mandates regarding oxygenated gasoline be repealed, the market for domestic ethanol could be adversely impacted. Economic incentives to blend based on the relative value of gasoline versus ethanol, taking into consideration the octane value of ethanol, environmental requirements and the

RFS II mandate, may affect future demand. A significant increase in supply beyond the RFS II mandate could have an adverse impact on ethanol prices. Moreover, changes to RFS II could negatively impact the price of ethanol or cause imported sugarcane ethanol to become more economical than domestic ethanol.

According to RFS II, if mandatory renewable fuel volumes are reduced by at least 20% for two consecutive years, the EPA is required to modify, or reset, statutory volumes through 2022. Since 2018 is the first year the total RVOs are more than 20% below statutory levels, the EPA Administrator directed his staff to initiate the required technical analysis to perform any future reset consistent with the reset rules. If 2019 RVOs are also more than 20% below statutory levels, the RVO reset will be triggered under RFS II and the EPA will be required to modify statutory volumes through 2022 within one year of the trigger event, based on the same factors used to set the RVOs post-2022.

The U.S. Federal District Court for the D.C. Circuit ruled on July 28, 2017, in favor of the Americans for Clean Energy and its petitioners against the EPA related to its decision to lower the 2016 volume requirements. The Court concluded the EPA erred in how it interpreted the “inadequate domestic supply” waiver provision of RFS II, which authorizes the EPA to consider supply-side factors affecting the volume of renewable fuel available to refiners, blenders, and importers to meet the statutory volume requirements. As a result, the Court vacated the EPA’s decision to reduce the total renewable fuel volume requirements for 2016 through its waiver authority, which the EPA is expected to address.

On November 22, 2017, the EPA issued a Notice of Denial of Petitions for rulemaking to change the RFS point of obligation which resulted in the EPA confirming the point of obligation will not change. However, Valero Energy and refining trade group American Fuel and Petrochemical Manufacturers (AFPM) have challenged the EPA’s handling of the U.S. biofuel mandate in separate actions on January 26, 2018. AFPM is asking the D.C. U.S. Court of Appeals to review the EPA’s November 2017 decision to reject proposed changes to the structure of the RFS, including moving the point of obligation from refiners and importers of fuel to fuel blenders. Valero filed two petitions with the same court, one seeking review of the annual Renewable Volume Obligation (RVO) rule set by the EPA for 2018 and 2019, which dictates the

volumes of renewable fuels to be blended in the coming years, and a second arguing against the EPA's December 2017 assertion that the agency has fulfilled its duty to periodically review the RFS as directed by statute.

Future demand may be influenced by economic incentives to blend based on the relative value of gasoline versus ethanol, taking into consideration the octane value of ethanol, environmental requirements and the RFS II mandate. A significant increase in supply beyond the RFS II mandate could have an adverse impact on ethanol prices. Moreover, any changes to RFS II originating from issues associated with the market price of RINs could negatively impact the demand for ethanol, discretionary blending of ethanol and/or the price of ethanol. Recent actions by the EPA to grant small refiner exemptions as well as the Philadelphia Energy Solutions Bankruptcy Court's decision to grant RIN relief have resulted in lower RIN prices.

Flexible-fuel vehicles, which are designed to run on a mixture of fuels such as E85, receive preferential treatment to meet corporate average fuel economy standards in the form of CAFE credits. Flexible-fuel vehicle credits have been decreasing since 2014 and will be completely phased out by 2020. Absent CAFE preferences, auto manufacturers may not be willing to build flexible-fuel vehicles, reducing the growth of E85 markets and resulting in lower ethanol prices.

To the extent federal or state laws or regulations are modified, the demand for ethanol may be reduced, which could negatively and materially affect our financial performance.

We may be affected by our portfolio optimization strategy.

We announced that we are evaluating the performance of our entire portfolio of assets and businesses. Based on this evaluation, we may sell certain assets or businesses or exit particular markets that are no longer a strategic fit or no longer meet their growth or profitability targets. Depending on the nature of the assets sold, our profitability may be impacted by lost operating income or cash flows from such businesses. In addition, divestitures we complete may not yield the targeted improvements in their business and may divert management's attention from our day-to-day operations. Any charges that we are required to record or the failure to achieve the intended financial results associated with our portfolio optimization strategy could have an adverse effect on our business, financial condition or results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Employees surrender shares when restricted stock grants are vested to satisfy statutory minimum required payroll tax withholding obligations.

The following table lists the shares that were surrendered during the third quarter of 2018:

Period	Total Number of Shares Withheld for Employee Awards	Average Price Paid per Share
July 1 - July 31	6,895	$ 16.60
August 1 - August 31	1,420	17.36
September 1 - September 30	3,637	17.00
Total	11,952	$ 16.81

In August 2014, we announced a share repurchase program of up to $100 million of our common stock. Under this program, we may repurchase shares in open market transactions, privately negotiated transactions, accelerated buyback programs, tender offers or by other means. The timing and amount of the transactions are determined by management based on its evaluation of market conditions, share price, legal requirements and other factors. The program may be suspended, modified or discontinued at any time, without prior notice. We did not repurchase any shares during the third quarter of 2018 due to certain restrictions under the term loan agreement. Approximately $83.3 million of shares are remaining to be repurchased under the program.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibit Index

Exhibit No.	Description of Exhibit
2.1	Asset Purchase Agreement among Green Plains Bluffton LLC, Green Plains Holdings II LLC, Green Plains Inc. and Valero Renewable Fuels Company, LLC, dated October 8, 2018. (The schedules to the Asset Purchase Agreement have been omitted. The Company will furnish such schedules to the SEC upon request.) (incorporated herein by reference to Exhibit 2.1 of the company's Current Report on Form 8-K filed on October 10, 2018)
2.2	Asset Purchase Agreement among Green Plains Partners LP, Green Plains Holdings LLC, Green Plains Operating Company LLC, Green Plains Ethanol Storage LLC, Green Plains Logistics LLC, Green Plains Inc., Green Plains Trade Group LLC, Green Plains Bluffton LLC and Green Plains Holdings II LLC, dated October 8, 2018. (The schedules to the Asset Purchase Agreement have been omitted. The Company will furnish such schedules to the SEC upon request.) (incorporated herein by reference to Exhibit 2.2 of the company's Current Report on Form 8-K filed on October 10, 2018)
4.1	Indenture relating to the 3.25% Convertible Senior Notes due 2019, dated August 14, 2018, between Green Plains Inc. and Willington Trust, National Association (incorporated herein by reference to Exhibit 4.1 of the company's Current Report on Form 8-K filed on August 14, 2018)
10.1	Seventh Amendment to the Credit Agreement, dated as of October 5, 2018, by and among Green Plains Cattle Company LLC and Bank of the West and ING Capital LLC, as Joint Administrative Agents, and the lenders party to the Credit Agreement
10.2	Seller Guaranty, dated October 8, 2018, Green Plains Inc.
10.3	Buyer Guaranty, dated October 8, 2018, Valero Energy Corporation
10.4	Second Amendment to Credit Agreement, dated February 16, 2018, by and among Green Plains Operating Company LLC, as the Borrower, the subsidiaries of the Borrower identified therein, Bank of America, N.A. and the other lenders party thereto.
10.5	Incremental Joinder Agreement, dated February 20, 2018, among Green Plains Operating Company LLC and Bank of America, as Administrative Agent
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) and Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) and Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of 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	The following information from Green Plains Inc.'s Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2018, formatted in Extensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Statements of Cash Flows, and (v) the Notes to Consolidated Financial Statements

56

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 hereunto duly authorized.

GREEN PLAINS INC.

(Registrant)

Date: November 9, 2018

By: /s/ Todd A. Becker _

Todd A. Becker
President and Chief Executive Officer

(Principal Executive Officer)

Date: November 9, 2018

By: /s/ John W. Neppl _

John W. Neppl
Chief Financial Officer

(Principal Financial Officer)