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 March 31, 2017

Commission File Number 001-32924

GREEN PLAINS INC.

(Exact name of registrant as specified in its charter)

Iowa	**84-1652107**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1811 Aksarben Drive, Omaha, NE 68106	**(402) 884-8700**
(Address of principal executive offices, including zip code)	(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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 ☐ (Do not check if a smaller reporting company)	
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 May 1, 2017, was 40,010,035 shares.

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Commonly Used Defined Terms

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

Green Plains Inc. and Subsidiaries:

Green Plains; the company	Green Plains Inc. and its subsidiaries
BioProcess Algae	BioProcess Algae 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
SCI Ingredients	SCI Ingredients Holdings, Inc.

Accounting Defined Terms:

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
GAAP	U.S. Generally Accepted Accounting Principles
LIBOR	London Interbank Offered Rate
LTIP	Green Plains Partners LP 2015 Long-Term Incentive Plan
SEC	Securities and Exchange Commission

Industry Defined Terms:

CAFE	Corporate Average Fuel Economy
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 2007, as amended
EPA	U.S. Environmental Protection Agency
MmBtu	Million British Thermal Units
Mmg	Million gallons
Mmgy	Million gallons per year
RFS II	Renewable Fuels Standard II
RIN	Renewable identification number
U.S.	United States

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(in thousands, except share amounts)

	March 31, 2017	December 31, 2016
	(unaudited)	
ASSETS		
Current assets		
Cash and cash equivalents	$ 256,468	$ 304,211
Restricted cash	38,974	51,979
Accounts receivable, net of allowances of $288 and $266, respectively	96,986	147,495
Income taxes receivable	10,201	10,379
Inventories	464,994	422,181
Prepaid expenses and other	18,337	17,095
Derivative financial instruments	33,918	47,236
Total current assets	919,878	1,000,576
Property and equipment, net of accumulated depreciation of $442,058 and $417,993, respectively	1,171,728	1,178,706
Goodwill	183,696	183,696
Other assets	145,844	143,514
Total assets	$ 2,421,146	$ 2,506,492
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 129,100	$ 192,275
Accrued and other liabilities	46,147	67,473
Derivative financial instruments	7,131	8,916
Short-term notes payable and other borrowings	335,695	291,223
Current maturities of long-term debt	6,171	35,059
Total current liabilities	524,244	594,946
Long-term debt	782,957	782,610
Deferred income taxes	136,448	140,262
Other liabilities	8,848	9,483
Total liabilities	1,452,497	1,527,301
Commitments and contingencies (Note 13)		
Stockholders' equity		
Common stock, $0.001 par value; 75,000,000 shares authorized; 46,380,727 and 46,079,108 shares issued, and 38,665,737 and 38,364,118 shares outstanding, respectively	46	46
Additional paid-in capital	657,901	659,200
Retained earnings	275,110	283,214
Accumulated other comprehensive loss	(5,629)	(4,137)
Treasury stock, 7,714,990 shares	(75,816)	(75,816)
Total Green Plains stockholders' equity	851,612	862,507
Noncontrolling interests	117,037	116,684
Total stockholders' equity	968,649	979,191
Total liabilities and stockholders' equity	$ 2,421,146	$ 2,506,492

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 March 31,	
	2017	**2016**
Revenues		
Product revenues	$ 886,212	$ 747,183
Service revenues	1,472	2,021
Total revenues	887,684	749,204
Costs and expenses		
Cost of goods sold	811,896	724,687
Operations and maintenance expenses	8,531	8,645
Selling, general and administrative expenses	23,782	20,373
Depreciation and amortization expenses	26,083	18,145
Total costs and expenses	870,292	771,850
Operating income (loss)	17,392	(22,646)
Other income (expense)		
Interest income	364	410
Interest expense	(18,496)	(10,798)
Other, net	10	(1,675)
Total other expense	(18,122)	(12,063)
Loss before income taxes	(730)	(34,709)
Income tax benefit	(2,381)	(14,893)
Net income (loss)	1,651	(19,816)
Net income attributable to noncontrolling interests	5,248	4,322
Net loss attributable to Green Plains	$ (3,597)	$ (24,138)
Earnings per share:		
Net loss attributable to Green Plains - basic	$ (0.09)	$ (0.63)
Net loss attributable to Green Plains - diluted	$ (0.09)	$ (0.63)
Weighted average shares outstanding:		
Basic	38,420	38,197
Diluted	38,420	38,197
Cash dividend declared per share	$ 0.12	$ 0.12

See accompanying notes to the consolidated financial statements.

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(unaudited and in thousands)

	Three Months Ended March 31,	
	2017	**2016**
Net income (loss)	$ 1,651	$ (19,816)
Other comprehensive income (loss), net of tax:		
Unrealized gains on derivatives arising during period, net of tax expense of $968 and $756, respectively	1,642	1,526
Reclassification of realized gains on derivatives, net of tax expense of $1,848 and $707, respectively	(3,134)	(1,427)
Total other comprehensive income (loss), net of tax	(1,492)	99
Comprehensive income (loss)	159	(19,717)
Comprehensive income attributable to noncontrolling interests	5,248	4,322
Comprehensive loss attributable to Green Plains	$ (5,089)	$ (24,039)

See accompanying notes to the consolidated financial statements.

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited and in thousands)

	Three Months Ended March 31,	
	2017	**2016**
Cash flows from operating activities:		
Net income (loss)	$ 1,651	$ (19,816)
Adjustments to reconcile net income (loss) to net cash provided (used) by operating activities:		
Depreciation and amortization	26,083	18,145
Amortization of debt issuance costs and debt discount	4,020	3,665
Deferred income taxes	(2,934)	(20,387)
Stock-based compensation	2,511	2,263
Undistributed equity in loss of affiliates	-	1,675
Other	23	103
Changes in operating assets and liabilities before effects of business combinations:		
Accounts receivable	50,486	(10,036)
Inventories	(41,911)	(9,562)
Derivative financial instruments	9,138	(1,797)
Prepaid expenses and other assets	(1,228)	760
Accounts payable and accrued liabilities	(86,420)	(49,190)
Current income taxes	178	3,216
Other	(9)	1,154
Net cash used by operating activities	(38,412)	(79,807)
Cash flows from investing activities:		
Purchases of property and equipment	(14,902)	(18,571)
Acquisition of a business, net of cash acquired	(4,074)	-
Distributions from (investments in) unconsolidated subsidiaries	(2,399)	260
Net cash used by investing activities	(21,375)	(18,311)
Cash flows from financing activities:		
Proceeds from the issuance of long-term debt	14,700	56,000
Payments of principal on long-term debt	(46,845)	(5,947)
Proceeds from short-term borrowings	1,100,076	954,363
Payments on short-term borrowings	(1,055,664)	(906,115)
Payments of cash dividends and distributions	(9,461)	(9,248)
Change in restricted cash	12,989	9,756
Payments related to tax withholdings for stock-based compensation	(3,801)	(2,116)
Proceeds from exercise of stock options	50	-
Net cash provided by financing activities	12,044	96,693
Net change in cash and cash equivalents	(47,743)	(1,425)
Cash and cash equivalents, beginning of period	304,211	384,867
Cash and cash equivalents, end of period	$ 256,468	$ 383,442

Continued on the following page

GREEN PLAINS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited and in thousands)

Continued from the previous page

	Three Months Ended March 31,	
	2017	**2016**
Supplemental disclosures of cash flow		
Cash paid for income taxes	$ 336	$ 2,276
Cash paid for interest	$ 15,804	$ 9,343

See accompanying notes to the consolidated financial statements.

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. Interim period results are not necessarily indicative of the results to be expected for the entire year. The company owns a 62.5% limited partner interest and a 2.0% general partner interest in Green Plains Partners LP. Public investors own the remaining 35.5% limited partner interest in the partnership. The partnership is consolidated in the company’s financial statements. Effective April 1, 2016, the company increased its ownership of BioProcess Algae, a joint venture formed in 2008, to 82.8% and consolidated BioProcess Algae in its consolidated financial statements beginning on that date.

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 footnotes 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, 2016.

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.

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 or stockholders’ equity.

Use of Estimates in the Preparation of Consolidated Financial Statements

The preparation of the consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and 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, 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.

Description of Business

Green Plains is North America’s second largest consolidated owner of ethanol plants. The company operates within four business segments: (1) ethanol production, which includes the production of ethanol, distillers grains and corn oil, (2) agribusiness and energy services, which includes grain handling and storage and 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 the cattle feedlot, vinegar production and food-grade corn oil operations, and (4) partnership, which includes fuel storage and transportation services.

Revenue Recognition

The company recognizes revenue when the following criteria are satisfied: persuasive evidence that an arrangement exists, title of product and risk of loss are transferred to the customer, price is fixed and determinable and collectability is reasonably assured.

Sales of ethanol, distillers grains, corn oil, natural gas and other commodities by the company's marketing business are recognized when title of product and risk of loss are transferred to an external customer. Revenues related to marketing for third parties are presented on a gross basis when the company takes title of the product and assumes risk of loss. Unearned revenue is recorded for goods in transit when the company has received payment but the title 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 fixed-price, 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. These transactions are reported net as a component of revenues. Revenues also include realized gains and losses on related derivative financial instruments, ineffectiveness on cash flow hedges and reclassifications of realized gains and losses on effective cash flow hedges from accumulated other comprehensive income or loss.

Sales of products, including agricultural commodities, cattle and vinegar, are recognized when title of product and risk of loss are transferred to the customer, which depends on the agreed upon terms. The sales terms provide passage of title when shipment is made or the commodity is delivered. 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 when there is evidence an arrangement exists; risk of loss and title transfer to the customer; the price is fixed or determinable; and collectability is reasonably ensured. Revenues from base storage, terminal or transportation services are recognized once these services are performed, which occurs when the product is delivered to the customer.

Cost of Goods Sold

Cost of goods sold includes direct labor, materials and plant overhead costs. Direct labor includes all compensation and related benefits of non-management personnel involved in ethanol plant, vinegar and cattle feedlot 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 unrealized 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 realized gains and losses on related derivative financial instruments, ineffectiveness on cash flow hedges and reclassifications of realized gains and losses on effective cash flow hedges from accumulated other comprehensive income or loss. Plant overhead consists primarily of plant and feedlot utilities, repairs and maintenance, yard 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 to minimize the effect of price changes on the agribusiness and energy services and food and ingredients segments' grain and cattle inventories and forward purchase and sales contracts. 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 the fair value of grain inventories held for sale, forward purchase and sale 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 includes 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 minimize risk and the effect of price changes related 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, hedge accounting treatment.

Certain qualifying derivatives related to the 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. Ineffectiveness is recognized in current period results, while other unrealized gains and losses are reflected in accumulated other comprehensive income 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 the value of inventories and designates qualifying derivatives as fair value hedges. The carrying amount of the hedged inventory is adjusted in current period results for changes in fair value. Ineffectiveness of the hedges is recognized in current period results 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, 2017, the company adopted the amended guidance in ASC Topic 330, *Inventory: Simplifying the Measurement of Inventory*, which requires inventory to be measured at lower of cost or net realizable value. Net realizable value is the estimated selling prices during the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. The amended guidance was applied prospectively.

Effective January 1, 2017, the company adopted the amended guidance in ASC Topic 718, *Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, which requires all income tax effects of awards to be recognized in the income statement when the awards vest or settle. The amended guidance also allows an employer to repurchase more of an employee's shares than it can currently for tax withholding purposes without triggering liability accounting and make a policy election to account for forfeitures as they occur. The amended guidance requiring recognition of excess tax benefits and tax deficiencies in the income statement was applied prospectively. The amended guidance related to the timing of when excess tax benefits are recognized, did not have an impact on the consolidated financial statements. The amended guidance related to the presentation of employee taxes paid on the statement of cash flows was applied retrospectively. This change resulted in a $2.1 million increase in cash flows from operating activities and a decrease in cash flows from financing activities for the three months ended March 31, 2016. The company has elected to account for forfeitures as they occur. This change did not have a material impact on the financial statements.

Effective January 1, 2018, the company will adopt 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 will be applied retrospectively.

Effective January 1, 2018, the company will adopt the amended guidance in ASC Topic 606, *Revenue from Contracts with Customers*, which requires revenue recognition to reflect the transfer of promised goods or services to customers. The updated standard permits either the retrospective or cumulative effect transition method. Early application beginning January 1, 2017, is permitted. The company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements and related disclosures.

Effective January 1, 2018, the company will adopt 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 will be applied on a modified retrospective basis, with a cumulative-effect adjustment to retained earnings as of the beginning of the year of adoption.

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

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 and requires substantially all leases to be recognized by lessees on their balance sheet as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases. Early application is permitted. The company is currently evaluating the impact the adoption of the amended guidance will have on the consolidated financial statements and related disclosures.

Effective January 1, 2020, the company will adopt 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 would be recognized for 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. The amended guidance will be applied prospectively.

2. ACQUISITIONS

Acquisition of Fleischmann’s Vinegar Company

On October 3, 2016, the company acquired all of the issued and outstanding stock of SCI Ingredients, the holding company of Fleischmann’s Vinegar Company, Inc., for $258.3 million in cash. A portion of the purchase price was used to repay existing debt. Fleischmann’s Vinegar is one of the world’s largest producers of food-grade industrial vinegar.

The purchase price allocation is based on the preliminary results of independent valuations. The purchase price and purchase price allocation are preliminary until contractual post-closing working capital adjustments are finalized and the final independent valuation reports are issued.

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
Cash	$ 4,148
Inventory	9,308
Accounts receivable, net	13,919
Prepaid expenses and other	1,054
Property and equipment	43,011
Intangible assets	94,500
Current liabilities	(9,689)
Income taxes payable	(330)
Deferred tax liabilities	(40,421)
Total identifiable net assets	115,500
Goodwill	142,819
Purchase price	$ 258,319

As of March 31, 2017, based on the preliminary valuations, the company's customer relationship intangible asset recognized in connection with the Fleischmann's acquisition is $81.2 million, net of $2.8 million of accumulated amortization, and has a 15-year weighted-average amortization period. As of March 31, 2017, the company also has an indefinite-lived trade name intangible asset of $10.5 million. The company recognized $1.4 million of amortization expense associated with the amortizing customer relationship intangible asset during the three months ended March 31, 2017 and estimated amortization expense for the next five years is $5.6 million per annum. The excess of the purchase price over the intangibles fair values was allocated to goodwill, none of which is expected to be deductible for tax purposes. The goodwill is primarily attributable to the synergies expected to arise after the acquisition.

Acquisition of Abengoa Ethanol Plants

On September 23, 2016, the company acquired three ethanol plants located in Madison, Illinois, Mount Vernon, Indiana, and York, Nebraska from subsidiaries of Abengoa S.A. for approximately $234.9 million for the ethanol plant assets, and $19.1 million for working capital acquired and liabilities assumed. These ethanol facilities have a combined annual production capacity of approximately 230 mmgy.

The purchase price allocation is based on the preliminary results of an independent valuation. The purchase price and purchase price allocation are preliminary until contractual post-closing working capital adjustments are finalized and the final independent valuation report is issued. 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
Inventory	$ 16,904
Accounts receivable, net	1,826
Prepaid expenses and other	2,224
Property and equipment, net	234,947
Other assets	3,885
Current maturities of long-term debt	(406)
Current liabilities	(2,580)
Long-term debt	(2,763)
Total identifiable net assets	$ 254,037

Concurrently with the company's acquisition of the Abengoa ethanol plants, on September 23, 2016, the partnership acquired the storage assets of the Abengoa ethanol plants from the company for $90.0 million in a transfer between entities under common control and entered into amendments to the related commercial agreements with Green Plains Trade.

3. FAIR VALUE DISCLOSURES

The following methods, assumptions and valuation techniques were used to estimate 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 1 unrealized gains and losses on commodity derivatives relate to exchange-traded open trade equity and option values in the company's brokerage accounts.

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 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.

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 March 31, 2017			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Reclassification for Balance Sheet Presentation	Total
Assets:				
Cash and cash equivalents	$ 256,468	$ -	$ -	$ 256,468
Restricted cash	38,974	-	-	38,974
Margin deposits	28,878	-	(28,878)	-
Inventories carried at market	-	196,925	-	196,925
Unrealized gains on derivatives	10,823	9,417	13,678	33,918
Other assets	115	1	-	116
Total assets measured at fair value	$ 335,258	$ 206,343	$ (15,200)	$ 526,401
Liabilities:				
Accounts payable (1)	$ -	$ 25,291	$ -	$ 25,291
Unrealized losses on derivatives	15,200	7,131	(15,200)	7,131
Other	-	59	-	59
Total liabilities measured at fair value	$ 15,200	$ 32,481	$ (15,200)	$ 32,481

	Fair Value Measurements at December 31, 2016			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Reclassification for Balance Sheet Presentation	Total
Assets:				
Cash and cash equivalents	$ 304,211	$ -	$ -	$ 304,211
Restricted cash	51,979	-	-	51,979
Margin deposits	50,601	-	(50,601)	-
Inventories carried at market (2)	-	154,022	-	154,022
Unrealized gains on derivatives	8,272	14,818	24,146	47,236
Other assets	116	-	-	116
Total assets measured at fair value	$ 415,179	$ 168,840	$ (26,455)	$ 557,564
Liabilities:				
Accounts payable (1)	$ -	$ 35,288	$ -	$ 35,288
Unrealized losses on derivatives	26,455	8,916	(26,455)	8,916
Other liabilities	-	81	-	81
Total liabilities measured at fair value	$ 26,455	$ 44,285	$ (26,455)	$ 44,285

(1) Accounts payable is generally stated at historical amounts with the exception of $25.3 million and $35.3 million at March 31, 2017 and December 31, 2016, 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.

(2) Inventories carried at market have been revised from previously reported results to include $77.0 million of inventories held under a fair value hedging relationship. There was no impact to the financial statements resulting from this revision.

The company believes the fair value of its debt was approximately $1.1 billion compared with a book value of $1.1 billion at March 31, 2017, and December 31, 2016, respectively. The company estimated the fair value of its outstanding debt using Level 2 inputs. The company believes the fair values of its accounts receivable approximated book value, which was $97.0 million and $147.5 million at March 31, 2017 and December 31, 2016, 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.

4. SEGMENT INFORMATION

As a result of acquisitions during 2016, the company implemented organizational segment changes during the fourth quarter of 2016, whereby the company management now reports the financial and operating performance in the following four operating segments: (1) ethanol production, which includes the production of ethanol, distillers grains and corn oil, (2) agribusiness and energy services, which includes grain handling and storage and marketing and merchant trading for company-produced and third-party ethanol, distillers grains, corn oil and other commodities, (3) food and ingredients, which includes the cattle feedlot, vinegar production and food-grade corn oil operations and (4) partnership, which includes fuel storage and transportation services. Prior periods have been reclassified to conform to the revised segment presentation.

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 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 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 March 31,	
	2017	2016
Revenues:		
Ethanol production:		
Revenues from external customers	$ 619,879	$ 528,328
Intersegment revenues	1,496	-
Total segment revenues	621,375	528,328
Agribusiness and energy services:		
Revenues from external customers	168,311	160,144
Intersegment revenues	9,492	7,409
Total segment revenues	177,803	167,553
Food and ingredients:		
Revenues from external customers	98,022	58,711
Intersegment revenues	38	37
Total segment revenues	98,060	58,748
Partnership:		
Revenues from external customers	1,472	2,021
Intersegment revenues	25,757	21,768
Total segment revenues	27,229	23,789
Revenues including intersegment activity	924,467	778,418
Intersegment eliminations	(36,783)	(29,214)
Revenues as reported	$ 887,684	$ 749,204

	Three Months Ended March 31,	
	2017	2016
Cost of goods sold:		
Ethanol production	$ 599,138	$ 534,498
Agribusiness and energy services	166,394	159,415
Food and ingredients	83,035	59,254
Partnership	-	-
Intersegment eliminations	(36,671)	(28,480)
	$ 811,896	$ 724,687

	Three Months Ended March 31,	
	2017	2016
Operating income (loss):		
Ethanol production	$ (6,598)	$ (29,565)
Agribusiness and energy services	6,369	3,737
Food and ingredients	9,626	(1,363)
Partnership	16,619	13,071
Intersegment eliminations	(75)	(698)
Corporate activities	(8,549)	(7,828)
	$ 17,392	$ (22,646)

	Three Months Ended March 31,	
	2017	2016
Depreciation and amortization:		
Ethanol production	$ 20,342	$ 15,780
Agribusiness and energy services	660	306
Food and ingredients	2,880	271
Partnership	1,254	1,217
Corporate activities	947	571
	$ 26,083	$ 18,145

The following table sets forth third-party revenues by product line (in thousands):

	Three Months Ended March 31,	
	2017	2016
Revenues:		
Ethanol	$ 597,407	$ 499,050
Distillers grains	118,696	112,218
Corn oil	40,697	20,875
Grain	26,024	51,055
Food and ingredients	90,485	56,232
Service revenues	1,472	2,021
Other	12,903	7,753
	$ 887,684	$ 749,204

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

	March 31, 2017	December 31, 2016
Total assets (1):		
Ethanol production	$ 1,161,730	$ 1,206,155
Agribusiness and energy services	527,974	579,977
Food and ingredients	415,790	406,429
Partnership	74,149	74,999
Corporate assets	258,654	257,652
Intersegment eliminations	(17,151)	(18,720)
	$ 2,421,146	$ 2,506,492

(1) Asset balances by segment exclude intercompany receivable balances.

5. INVENTORIES

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

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

	March 31, 2017	December 31, 2016
Finished goods	$ 137,490	$ 99,009
Commodities held for sale	54,646	65,926
Raw materials	145,747	135,516
Work-in-process	93,645	91,093
Supplies and parts	33,466	30,637
	$ 464,994	$ 422,181

6. GOODWILL

The company did not have any changes in the carrying amount of goodwill, which was $183.7 million at March 31, 2017, and December 31, 2016. Goodwill of $30.3 million, $142.8 million and $10.6 million is attributable to the ethanol production segment, food and ingredients segment and the partnership segment, respectively.

7. DERIVATIVE FINANCIAL INSTRUMENTS

At March 31, 2017, the company’s consolidated balance sheet reflected unrealized losses of $5.6 million, net of tax, in accumulated other comprehensive income (loss). The company expects these losses will be reclassified in 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	
	March 31, 2017	December 31, 2016	March 31, 2017	December 31, 2016
Derivative financial instruments (1)	$ 5,040 (2)	$ 14,818 (3)	$ -	$ -
Other assets	1	-	-	-
Accrued and other liabilities	-	-	7,131	27,099
Other liabilities	-	-	59	81
Total	$ 5,041	$ 14,818	$ 7,190	$ 27,180

(1) Derivative financial instruments as reflected on the consolidated balance sheets are net of related margin deposit assets of $28.9 million and $50.6 million at March 31, 2017 and December 31, 2016, respectively.
(2) Balance at March 31, 2017 includes $6.8 million of net unrealized losses on derivative financial instruments designated as cash flow hedging instruments.
(3) Balance at December 31, 2016 includes $17.0 million of net unrealized losses on derivative financial instruments designated as cash flow hedging instruments.

Refer to *Note 3 - Fair Value Disclosures*, which contains fair value information related to derivative financial instruments.

Effect of Derivative Instruments on Consolidated Statements of Operations and Consolidated Statements of Stockholders' Equity and 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):

Gains (Losses) on Derivative Instruments Not Designated in a Hedging Relationship	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Revenues	$ (5,048)	$ (2,794)
Cost of goods sold	11,936	(5,846)
Net increase (decrease) recognized in earnings before tax	$ 6,888	$ (8,640)

Gains (Losses) Due to Ineffectiveness of Cash Flow Hedges	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Revenues	$ (133)	$ -
Cost of goods sold	-	-
Net decrease recognized in earnings before tax	$ (133)	$ -

Gains (Losses) Reclassified from Accumulated Other Comprehensive Income (Loss) into Net Income	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Revenues	$ 4,152	$ 245
Cost of goods sold	830	1,889
Net increase recognized in earnings before tax	$ 4,982	$ 2,134

Effective Portion of Cash Flow Hedges Recognized in Other Comprehensive Income (Loss)	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Commodity Contracts	$ 2,610	$ 2,282

Gains (Losses) from Fair Value Hedges of Inventory	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Revenues (effect of change in inventory value)	$ 1,421	$ 1,760
Cost of goods sold (effect of change in inventory value)	(1,928)	(4,898)
Revenues (effect of fair value hedge)	(1,095)	(1,760)
Cost of goods sold (effect of fair value hedge)	3,039	5,808
Ineffectiveness recognized in earnings before tax	$ 1,437	$ 910

There were no gains or losses from discontinuing cash flow or fair value hedge treatment during the three months ended March 31, 2017 and 2016.

The open commodity derivative positions as of March 31, 2017, are as follows (in thousands):

March 31, 2017					
	Exchange Traded	**Non-Exchange Traded**			
Derivative Instruments	**Net Long & (Short) (1)**	**Long (2)**	**(Short) (2)**	**Unit of Measure**	**Commodity**
Futures	(72,350)			Bushels	Corn, Soybeans and Wheat
Futures	340 [3]			Bushels	Corn
Futures	21,915 [4]			Bushels	Corn
Futures	164,112			Gallons	Ethanol
Futures	(5,880)[3]			Gallons	Ethanol
Futures	(12,390)[4]			Gallons	Ethanol
Futures	(1,470)			MmBTU	Natural Gas
Futures	(6,660)[4]			MmBTU	Natural Gas
Futures	6,800			Pounds	Livestock
Futures	(123,240)[3]			Pounds	Livestock
Futures	(229)			Barrels	Crude Oil
Futures	(43)[4]			Barrels	Crude Oil
Futures	3,444 [3]			Gallons	Natural Gasoline
Options	1,414			Bushels	Corn, Soybeans and Wheat
Options	(22,203)			Gallons	Ethanol
Options	(4,718)			Pounds	Livestock
Options	120			Barrels	Crude Oil
Forwards		18,298	(1,751)	Bushels	Corn and Soybeans
Forwards		34,105	(337,535)	Gallons	Ethanol
Forwards		105	(323)	Tons	Distillers Grains
Forwards		30,437	(152,923)	Pounds	Corn Oil
Forwards		18,246	(1,599)	MmBTU	Natural Gas
Forwards		873	(670)	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 or non-exchange traded forwards 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 $8.2 million and $3.4 million for the three months ended March 31, 2017, and 2016, respectively.

8. DEBT

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

	March 31, 2017	December 31, 2016
Green Plains Processing:		
$345.0 million term loan	$ 264,798	$ 294,011
Fleischmann's Vinegar:		
$130.0 million term loan	125,460	125,609
$15.0 million revolving credit facility	4,500	4,000
Green Plains Partners:		
$155.0 million revolving credit facility	126,500	129,000
Corporate:		
$120.0 million convertible notes due 2018	110,323	108,817
$170.0 million convertible notes due 2022	128,711	127,239
Other	28,836	28,993
Total long-term debt	789,128	817,669
Less: current portion of long-term debt	(6,171)	(35,059)
Long-term debt	$ 782,957	$ 782,610

Short-term notes payable and other borrowings at March 31, 2017, include working capital revolvers at Green Plains Cattle, Green Plains Grain and Green Plains Trade with outstanding balances of $63.5 million, $112.0 million and $109.3 million, respectively. Green Plains Grain also had $50.9 million in outstanding short-term inventory financing arrangements at March 31, 2017. Short-term notes payable and other borrowings at December 31, 2016, include working capital revolvers at Green Plains Cattle, Green Plains Grain and Green Plains Trade with outstanding balances of $63.5 million, $102.0 million and $125.7 million, respectively.

Ethanol Production Segment

Green Plains Processing has a $345.0 million senior secured credit facility, which is guaranteed by the company and subsidiaries of Green Plains Processing and secured by the stock and substantially all of the assets of Green Plains Processing. The interest rate is LIBOR, subject to a 1.00% floor, plus 5.50% and matures on June 30, 2020. The terms of the credit facility require the borrower to maintain a maximum total leverage ratio of 4.00x at the end of each quarter, decreasing to 3.25x over the life of the credit facility, and a minimum fixed charge coverage ratio of 1.25x. As of March 31, 2017, the maximum total leverage ratio was 3.75x. The credit facility also has a provision requiring the company to make special quarterly payments of 50% to 75% of its available free cash flow, subject to certain limitations.

At March 31, 2017, the interest rate on this term debt was 6.50%. Scheduled principal payments are $0.9 million each quarter until maturity.

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.

Lenders receive a first priority lien on certain cash, inventory, accounts receivable and other assets owned by Green Plains Grain as security on the credit facility. The terms impose affirmative and negative covenants, including maintaining minimum working capital of $20.0 million and tangible net worth of $26.3 million for 2017. 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 March 31, 2017, 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 Grain has entered into short-term inventory financing agreements with a financial institution. At March 31, 2017, 14.8 million bushels of corn had been designated as collateral under these agreements at initial values totaling $49.6 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 March 31, 2017, the short-term notes payable were valued at $50.9 million and were measured using Level 2 inputs.

Green Plains Trade has a $150.0 million senior secured asset-based revolving credit facility, which matures on November 26, 2019, 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. Advances are subject to variable interest rates equal to LIBOR plus 2.50% or the base rate plus 1.50%. The unused portion of the credit facility is also subject to a commitment fee of 0.5% per annum.

The terms impose affirmative and negative covenants, including maintaining a fixed charge coverage ratio of 1.15x. 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.

At March 31, 2017, Green Plains Trade had restricted cash of $22.0 million on the consolidated balance sheet, the use of which was restricted for repayment towards the outstanding loan balance.

Food and Ingredients Segment

Green Plains Cattle has a $100.0 million senior secured asset-based revolving credit facility, which matures on October 31, 2017, to finance working capital for the cattle feedlot 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 are subject to variable interest rates equal to LIBOR plus 2.00% to 3.00%, or the base rate plus 0.00% to 0.25%, depending upon the preceding three months' excess borrowing availability. The credit facility also includes an accordion feature that enables the credit facility to be increased by up to $50.0 million with agent approval. The unused portion of the credit facility is also subject to a commitment fee of 0.20% to 0.25% per annum, depending on the preceding three months' excess borrowing availability. Subsequent to March 31, 2017, the company amended the revolving credit facility, discussed in *Note 15 – Subsequent Events*.

Lenders receive a first priority lien on certain cash, inventory, accounts receivable, property and equipment and other assets owned by Green Plains Cattle as security on the credit facility. The terms impose affirmative and negative covenants, including maintaining working capital of $15.0 million and tangible net worth of $22.7 million for 2017 and a total debt to tangible net worth ratio of 3.50x. Capital expenditures are limited to $3.0 million per year under the credit facility, plus $5.0 million per year if funded by a contribution from parent, plus any unused amounts from the previous year.

Fleischmann's Vinegar has a $130.0 million senior secured term loan and a $15.0 million senior secured revolving credit facility, which mature on October 3, 2022, to finance the purchase of Fleischmann's Vinegar and to fund working capital for its vinegar manufacturing operations. Beginning January 1, 2017, the term loan is subject to mandatory prepayments based on the preceding fiscal year's excess cash flow. Term loan prepayments are generally subject to prepayment fees of 1.0% to 2.0% if prepaid before the second anniversary of the credit agreement. The term loan and loans under the revolving credit facility each bear interest at a floating rate based on the consolidated total net leverage ratio, adjusted quarterly beginning September 30, 2017, to either a base rate plus an applicable margin of 5.0% to 6.0% or to LIBOR plus an applicable margin of 6.0% to 7.0%. The unused portion of the Revolving Loan Commitment is also subject to a commitment fee of 0.5% per annum.

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, make distributions and enter into transactions with affiliates. The financial covenants include requirements to maintain a minimum consolidated fixed charge coverage ratio ranging from 1.00x to 1.10x and a maximum consolidated total net leverage ratio ranging from 5.00x to 7.00x. The consolidated fixed charge coverage ratio is calculated by summing the four preceding fiscal quarters' EBITDA less capital

expenditures and dividing that sum by the sum of the four preceding fiscal quarters' cash interest and taxes, scheduled principal payments and parent management fees. The consolidated total net leverage ratio is calculated by dividing total net indebtedness by the sum of the four preceding fiscal quarters' EBITDA. Beginning in 2017, the credit facility also has a provision requiring the company to make special annual payments of 0% to 50% of its available free cash flow, subject to certain limitations.

Partnership Segment

Green Plains Partners, through a wholly owned subsidiary, has a $155.0 million revolving credit facility, as amended, which matures on July 1, 2020, to fund working capital, acquisitions, distributions, capital expenditures and other general partnership purposes. 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 credit facility may be increased up to $100.0 million without the consent of the lenders. 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 no more than 3.50x, and a minimum consolidated interest coverage ratio of no less than 2.75x, each of which is calculated on a pro forma basis with respect to acquisitions and divestitures occurring during the applicable period.

Corporate Activities

In August 2016, the company issued $170.0 million of 4.125% convertible senior notes due 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.

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. The company may 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 are not convertible unless certain conditions are satisfied. The conversion rate is subject to adjustment when the quarterly cash dividend exceeds $0.04 per share. The conversion rate was recently adjusted to 49.5785 shares of common stock per $1,000 of principal, which is equal to a conversion price of approximately $20.17 per share. The company may be obligated to increase the conversion rate in certain events, including redemption of the 3.25% notes.

The company may redeem all of the 3.25% notes at any time, 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.

On April 12, 2017, the company entered into a privately negotiated agreement with a holder, on behalf of certain beneficial owners, of the company's 3.25% notes. Under the agreement, 1,344,298 shares of the company's common stock and cash in the amount of accrued but unpaid interest on the 3.25% notes were exchanged for approximately $24.1 million in aggregate principal amount of the 3.25% notes. Following the closing of the agreement, $95.9 million aggregate principal amount of the 3.25% notes remain outstanding.

Covenant Compliance

The company was in compliance with its debt covenants as of March 31, 2017.

Capitalized Interest

The company had $11 thousand and $358 thousand of capitalized interest during the three months ended March 31, 2017, and 2016, respectively.

Restricted Net Assets

At March 31, 2017, there were approximately $886.9 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.

9. STOCK-BASED COMPENSATION

The company has an equity incentive plan that reserves 3,000,000 shares of common stock for issuance to its directors and employees. The company is seeking shareholder approval to increase the number of shares reserved for the equity incentive plan to 4,110,000 at its 2017 annual meeting. 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, 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, adjusted 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. Substantially all of the existing stock-based compensation has been equity awards.

The activity related to the exercisable stock options for the three months ended March 31, 2017, is as follows:

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2016	148,750	$ 12.36	2.8	$ 2,305
Granted	-	-	-	-
Exercised	(5,000)	10.00	-	78
Forfeited	-	-	-	-
Expired	-	-	-	-
Outstanding at March 31, 2017	143,750	$ 12.44	2.6	$ 1,770
Exercisable at March 31, 2017 (1)	143,750	$ 12.44	2.6	$ 1,770

(1) Includes in-the-money options totaling 143,750 shares at a weighted-average exercise price of $12.44.

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 options in the open market. The company uses newly issued shares of common stock to satisfy its stock-based payment obligations.

The non-vested stock award and deferred stock unit activity for the three months ended March 31, 2017, 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, 2016	1,139,560	$ 17.65	
Granted	485,143	24.30	
Forfeited	(27,717)	17.90	
Vested	(426,163)	19.07	
Non-Vested at March 31, 2017	1,170,823	$ 19.89	2.3

Green Plains Partners

Green Plains Partners has 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 three months ended March 31, 2017, 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, 2016	15,009	$ 15.99	
Granted	-	-	
Forfeited	-	-	
Vested	-	-	
Non-Vested at March 31, 2017	15,009	$ 15.99	0.3

Compensation costs for stock-based and unit-based payment plans during the three months ended March 31, 2017 and 2016 were approximately $2.5 million and $2.3 million, respectively. At March 31, 2017, there was $20.9 million of unrecognized compensation costs from stock-based and unit-based compensation related to non-vested awards. This compensation is expected to be recognized over a weighted-average period of approximately 2.3 years. The potential tax benefit related to stock-based payment is approximately 37.7% of these expenses.

10. 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. Diluted EPS was computed using the treasury stock method for the first quarter of 2016, by dividing net income by the weighted average number of common shares outstanding during the period, adjusted for the dilutive effect of any outstanding dilutive securities. During the first quarter of 2017, the company changed its method for calculating dilutive EPS for its convertible debt instruments from the treasury stock method to the if-converted method, as the company changed its financial strategy with respect to cash settlement of the convertible debt instruments. As such, the company computed EPS for the first quarter of 2017 by dividing net income on an if-converted basis, by the weighted average number of common shares outstanding during the period, adjusted for the dilutive effect of any outstanding dilutive securities.

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

	Three Months Ended March 31,	
	2017	2016
Basic EPS:		
Net loss attributable to Green Plains	$ (3,597)	$ (24,138)
Weighted average shares outstanding - basic	38,420	38,197
EPS - basic	$ (0.09)	$ (0.63)
EPS - diluted	$ (0.09)	$ (0.63)

Ten thousand shares of stock options were excluded from the computation of diluted EPS for the three months ended March 31, 2016, because the exercise prices of the corresponding awards were greater than the average market price of the company's common stock during the period. Also excluded from the computation of diluted EPS were 12.1 million shares and 108 thousand shares related to the effect of the convertible debt and stock-based compensation awards for the three months ended March 31, 2017, and 2016, respectively, as the inclusion of these shares would have been antidilutive.

11. STOCKHOLDERS' EQUITY

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

	Common Stock		Additional Paid-in	Retained	Accum. Other Comp. Income	Treasury Stock		Total Green Plains Stockholders'	Non-Controlling	Total Stockholders'
	Shares	Amount	Capital	Earnings	(Loss)	Shares	Amount	Equity	Interests	Equity
Balance, December 31, 2016	46,079	$ 46	$ 659,200	$ 283,214	$ (4,137)	7,715	$ (75,816)	$ 862,507	$ 116,684	$ 979,191
Net income (loss)	-	-	-	(3,597)	-	-	-	(3,597)	5,248	1,651
Cash dividends and distributions declared	-	-	-	(4,507)	-	-	-	(4,507)	(4,954)	(9,461)
Other comprehensive income, before reclassification	-	-	-	-	1,642	-	-	1,642	-	1,642
Amounts reclassified from accum. other comprehensive income	-	-	-	-	(3,134)	-	-	(3,134)	-	(3,134)
Other comprehensive loss, net of tax	-	-	-	-	(1,492)	-	-	(1,492)	-	(1,492)
Stock-based compensation	297	-	(1,349)	-	-	-	-	(1,349)	59	(1,290)
Stock options exercised	5	-	50	-	-	-	-	50	-	50
Balance, March 31, 2017	46,381	$ 46	$ 657,901	$ 275,110	$ (5,629)	7,715	$ (75,816)	$ 851,612	$ 117,037	$ 968,649

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

	Three Months Ended March 31,		Statements of Operations Classification
	2017	2016	
Gains on cash flow hedges:			
Ethanol commodity derivatives	$ 4,152	$ 245	Revenues
Corn commodity derivatives	830	1,889	Cost of goods sold
Total	4,982	2,134	Income before income taxes
Income tax expense	1,848	707	Income tax expense
Amounts reclassified from accumulated other comprehensive income	$ 3,134	$ 1,427	

12. 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 such income taxes on pre-tax income or loss attributable to the noncontrolling interest in the partnership.

The amount of unrecognized tax benefits for uncertain tax positions was $0.2 million as of March 31, 2017, and December 31, 2016. Recognition of these benefits would have a favorable impact on the company’s effective tax rate.

The 2017 effective tax rate can be affected by variances among 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.

13. 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 $10.3 million during the three months ended March 31, 2017, and $9.4 million during the three months ended March 31, 2016.

Aggregate minimum lease payments under these agreements for the remainder of 2017 and in future years are as follows (in thousands):

Year Ending December 31,	Amount
2017	$ 27,309
2018	27,009
2019	17,903
2020	12,385
2021	5,957
Thereafter	21,590
Total	$ 112,153

Commodities

As of March 31, 2017, the company had contracted future purchases of grain, corn oil, natural gas, crude oil, ethanol, distillers grains and cattle, valued at approximately $461.3 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. The court has directed the company and the seller to work together to determine the precise total of the shortfall amount due to Green Plains. The company believes the remaining amount due to Green Plains is approximately $5.5 million; however, the seller has the right to dispute the details of the calculation and appeal the underlying Superior Court order. Accordingly, the total amount Green Plains may receive is yet to be determined. The remaining amount due to the company represents a gain contingency which will not be recorded until all contingencies are resolved.

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.

14. RELATED PARTY TRANSACTIONS

Commercial Contracts

Three subsidiaries of the company have executed separate financing agreements for equipment with Amur Equipment Finance. Gordon Glade, a director of Amur Equipment Finance, is a member of the company's board of directors. Balances of approximately $752 thousand and $808 thousand related to these financing arrangements were included in debt at March 31, 2017, and December 31, 2016, respectively. Payments, including principal and interest, totaled $69 thousand during each of the three months ended March 31, 2017 and 2016. 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 $60 thousand during the three months ended March 31, 2017, and $48 thousand during the three months ended March 31, 2016. The company had no outstanding payables related to these agreements at March 31, 2017 or December 31, 2016.

15. SUBSEQUENT EVENTS

On April 26, 2017, the company entered into an asset purchase agreement to acquire two cattle-feeding operations from Cargill Cattle Feeders, LLC for $36.7 million, plus certain working capital adjustments. The transaction includes the feed yards located in Leoti, Kansas and Yuma, Colorado and will add combined feedlot capacity of 155,000 head of cattle to the company's operations. The transaction is anticipated to be completed in May of 2017, subject to customary closing conditions and regulatory approvals. The transaction will be financed using cash on hand.

As part of the transaction, the company will also enter into a long-term cattle supply agreement with Cargill Meat Solutions Corporation. Under the cattle supply agreement, all cattle placed in the Leoti, Yuma and the company's existing Kismet, Kansas feedlots will be sold exclusively to Cargill Meat Solutions under an agreed upon production and pricing arrangement.

On April 28, 2017, the company entered into an amendment of its Green Plains Cattle senior secured asset-based revolving credit facility with a group of lenders led by Bank of the West and ING Capital LLC. The amendment was completed to fund the additional working capital requirements related to the pending acquisition of two cattle feedlots. The amendment increases the maximum commitment from $100.0 million to $200.0 million until July 31, 2017, when it increases to $300.0 million. The maturity date is extended from October 31, 2017 to April 30, 2020.

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 amended credit facility also includes an accordion feature that enables the credit facility to be increased by up to $100.0 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. Interest is payable as required, but not less than quarterly in arrears and principal is due upon maturity.

The amended terms impose affirmative and negative covenants, including maintaining working capital of 15% of the commitment amount, tangible net worth of 20% of the commitment amount and a total debt to tangible net worth ratio of 3.50x. 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 the parent, plus unused amounts from the previous year.

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 together with our annual report on Form 10-K for the year ended December 31, 2016.

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 regarding future 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, 2016, 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 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. We own a 62.5% limited partner interest, a 2.0% general partner interest and all of the partnership's incentive distribution rights. The public owns the remaining 35.5% limited partner interest. The partnership is consolidated in our financial statements.

Recent Developments

In March 2017, we acquired the assets of a cattle-feeding operation located approximately 20 miles from our Hereford, Texas ethanol facility. The operation has the capacity to support 30,000 head of cattle and is included as part of our food and ingredients segment.

On April 12, 2017, we entered into a privately negotiated agreement with a holder, on behalf of certain beneficial owners, of our 3.25% notes. Under the agreement, 1,344,298 shares of our common stock and cash in the amount of accrued but unpaid interest on the 3.25% notes were exchanged for approximately $24.1 million in aggregate principal amount of the 3.25% notes. Following the closing of the agreement, $95.9 million aggregate principal amount of the 3.25% notes remain outstanding.

On April 26, 2017, we entered into an asset purchase agreement to acquire two cattle-feeding operations from Cargill Cattle Feeders, LLC for $36.7 million, plus certain working capital adjustments. The transaction includes the feed yards located in Leoti, Kansas and Yuma, Colorado and will add combined feedlot capacity of 155,000 head of cattle to our operations. The transaction is anticipated to be completed in May of 2017, subject to customary closing conditions and regulatory approvals. The transaction will be financed using cash on hand.

As part of the transaction, we will also enter into a long-term cattle supply agreement with Cargill Meat Solutions Corporation. Under the cattle supply agreement, all cattle placed in the Leoti, Yuma and our existing Kismet, Kansas feedlots will be sold exclusively to Cargill Meat Solutions under an agreed upon production and pricing arrangement.

On April 28, 2017, we entered into an amendment of our Green Plains Cattle senior secured asset-based revolving credit facility with a group of lenders led by Bank of the West and ING Capital LLC. The amendment was completed to fund the anticipated additional working capital requirements related to the pending acquisition of two cattle feedlots. The amendment increases the maximum commitment from $100.0 million to $200.0 million until July 31, 2017, when it increases to $300.0 million. The maturity date was extended from October 31, 2017 to April 30, 2020 among other amendments.

On June 14, 2016, we announced that we formed a 50/50 joint venture with Jefferson Gulf Coast Energy Partners, a subsidiary of Fortress Transportation and Infrastructure Investors LLC, to construct and operate an intermodal export and import fuels terminal at Jefferson's existing Beaumont, Texas terminal. The joint venture is expected to invest approximately $55 million in its Phase I development, which will initially focus on storage and throughput capabilities for multiple grades of ethanol. The joint venture's terminal will have direct access to multiple transportation options, including Aframax vessels, inland and coastwise barges, trucks, and unit trains with direct mainline service from the Union Pacific, BNSF and Kansas City Southern railroads. Construction of Phase I is expected to be completed in the second half of 2017. We will offer our interest in the joint venture to the partnership once commercial development is completed.

Results of Operations

We operated our facilities at approximately 90.1% of capacity, resulting in record ethanol production of 326.4 mmg for the first quarter of 2017, compared with 247.0 mmg for the same quarter last year. The increase in production volumes and associated revenues were primarily attributable to production at the Madison, Illinois, Mount Vernon, Indiana, and York, Nebraska plants, which were acquired on September 23, 2016.

Industry Trends and Factors Affecting our Results of Operations

During the first quarter of 2017, domestic ethanol production averaged 1.04 million barrels per day, up 6%, compared with an average of 0.98 million barrels per day during the same quarter last year, according to the EIA. U.S. domestic ethanol ending stocks were 23.7 million barrels on March 31, 2017, 3.0% higher than inventory at the end of the first quarter last year.

We expect ethanol production and consumption to be more in balance during the remaining quarters of 2017. Ethanol producers typically complete routine plant maintenance at their production facilities during the spring and fall, resulting in lower production volumes and inventory levels. Summer driving season in the U.S. is expected to increase gasoline demand and ethanol consumption over the next two quarters. The blend rate of ethanol into the U.S. gasoline supply remained at 9.9% during the first quarter of 2017, according to estimates by the EIA. Ethanol futures resumed trading at a discount to gasoline during the quarter, after trading at a premium for a portion of 2016, further improving the economics of using ethanol as an oxygenate and octane enhancer when blended with gasoline. The number of retail stations offering E15 has increased significantly since the beginning of the year. According to Growth Energy, 670 retail stations were selling E15 as of March 31, 2017, up from 431 stations at December 31, 2016.

CAFE was first enacted by Congress in 1975 to reduce energy consumption by increasing the fuel economy of cars and light trucks. CAFE has helped the ethanol industry by encouraging the use of E85 and recent legislature proposals have discussed reinstating the E85 CAFE credit. While scheduled to phase out in 2019, CAFE currently provides an efficiency bonus to flexible-fuel vehicles running on E85. According to IHS Markit, a leading provider of industry and market data and analytics, there are nearly 20 million flexible fuel vehicles on U.S. roads today. In addition, E85 is sold at more than 3,100 fuel stations in 46 states.

Global ethanol production increased 3.5% year over year to 26.6 billion gallons in 2016, up from 25.7 billion gallons in 2015, according to the Renewable Fuels Association. The United States and Brazil produced 58% and 27% of worldwide production, respectively, together accounting for approximately 80% of production growth year over year. Corn-based

ethanol from the United States continues to be more competitive worldwide due to the price of corn relative to sugar cane as a feedstock. 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 20 cents per pound during the first quarter of 2017, closing at 16.8 cents per pound on March 31, 2017. Brazil's national food supply agency, Companhia Nacional de Abastecimento, or CONAB, has projected a 4.9% reduction in Brazil's ethanol production year over year due to a smaller cane crop and attractive production economics for sugar.

Year-to-date domestic ethanol exports through February 28, 2017, were 259.8 mmg, up 68.6%, from 154.1 mmg for the comparable period in 2016. Brazil accounted for 42% of the domestic ethanol export volumes, while Canada, India, United Arab Emirates and the Philippines accounted for 20%, 14%, 8% and 5%, respectively. According to the EIA, net U.S. ethanol exports are forecasted to exceed one billion gallons in 2017.

Government actions, both domestic and abroad, can have a significant impact on the ethanol industry. On March 20, 2017, following a broad-based regulatory freeze imposed by the Trump administration, the EPA allowed the previously announced 2017 renewable volume obligations for conventional ethanol to go into effect, which was established at 15.0 billion gallons, up from 14.5 billion gallons in 2016. On March 2, 2017, the Consumer and Fuel Retailer Choice Act (H.R. 1311 and S. 517) was introduced in the Senate and the House of Representatives, proposing to lift restrictions on the sale of E15 between June 1 and September 15 by extending the Reid Vapor Pressure waiver, also known as the One-Pound Waiver, to gasoline blended with 15% ethanol. Also on March 2, 2017, the RFS Elimination Act (H.R. 1314) and RFS Reform Act (H.R. 1315) were introduced in the House of Representatives, proposing to repeal the renewable fuel program and cap the amount of ethanol allowed to be blended with conventional gasoline at 10% beginning in 2017. On April 25, 2017, an executive order was issued by the President forming a task force for the promotion of agriculture and rural prosperity, focused among other things, on furthering the nation's energy security by advancing traditional and renewable energy production in rural areas.

In Brazil, it is believed that certain ethanol industry participants are seeking the government's support to impose tariffs on imported ethanol. China's 30% tariff on U.S. and Brazil fuel ethanol, which took effect on January 1, 2017, reduced export volume to China year-to-date, however, export activity to other destinations overall has remained strong. Similarly, while the effect of government actions overseas on U.S. distillers grains exports has changed the mix of export destinations, specifically to China and Vietnam, other countries have become larger trading partners for distillers grains. Year-to-date U.S. distillers grains exports through February 28, 2017, were 2.0 million metric tons. Mexico, Turkey, China, Thailand, South Korea and Japan accounted for 61% of total U.S. distillers export volumes, according to the EIA.

Comparability of our Financial Results

As a result of acquisitions during 2016, we implemented segment organizational changes during the fourth quarter of 2016, whereby we now report the financial and operating performance in the following four operating segments: (1) ethanol production, which includes the production of ethanol, distillers grains and corn oil, (2) agribusiness and energy services, which includes grain handling and storage and 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 the cattle feedlot, vinegar production and food-grade corn oil operations and (4) partnership, which includes fuel storage and transportation services. Prior periods have been reclassified to conform to the revised segment presentation.

Effective April 1, 2016, we increased our ownership of BioProcess Algae, a joint venture formed in 2008, to 82.8% and currently own approximately 90.0%. 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.

On September 23, 2016, we acquired three ethanol production facilities located in Madison, Illinois, Mount Vernon, Indiana, and York, Nebraska, with combined annual production capacity of approximately 230 mmgy.

On October 3, 2016, we acquired Fleischmann's Vinegar, one of the world's largest producers of food-grade industrial vinegar which includes seven production facilities and four distribution warehouses.

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, 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.

We, together with our subsidiaries, own a 62.5% 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 35.5% 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 March 31,		%
	2017	**2016**	**Variance**
Revenues:			
Ethanol production:			
Revenues from external customers	$ 619,879	$ 528,328	17.3%
Intersegment revenues	1,496	-	*
Total segment revenues	621,375	528,328	17.6
Agribusiness and energy services:			
Revenues from external customers	168,311	160,144	5.1
Intersegment revenues	9,492	7,409	28.1
Total segment revenues	177,803	167,553	6.1
Food and ingredients:			
Revenues from external customers	98,022	58,711	67.0
Intersegment revenues	38	37	2.7
Total segment revenues	98,060	58,748	66.9
Partnership:			
Revenues from external customers	1,472	2,021	(27.2)
Intersegment revenues	25,757	21,768	18.3
Total segment revenues	27,229	23,789	14.5
Revenues including intersegment activity	924,467	778,418	18.8
Intersegment eliminations	(36,783)	(29,214)	25.9
Revenues as reported	$ 887,684	$ 749,204	18.5%

	Three Months Ended March 31,		%
	2017	**2016**	**Variance**
Cost of goods sold:			
Ethanol production	$ 599,138	$ 534,498	12.1%
Agribusiness and energy services	166,394	159,415	4.4
Food and ingredients	83,035	59,254	40.1
Partnership	-	-	*
Intersegment eliminations	(36,671)	(28,480)	28.8
	$ 811,896	$ 724,687	12.0%

	Three Months Ended March 31,		%
	2017	2016	Variance
Operating income (loss):			
Ethanol production	$ (6,598)	$ (29,565)	(77.7%)
Agribusiness and energy services	6,369	3,737	70.4
Food and ingredients	9,626	(1,363)	*
Partnership	16,619	13,071	27.1
Intersegment eliminations	(75)	(698)	*
Corporate activities	(8,549)	(7,828)	9.2
	$ 17,392	$ (22,646)	*

* Percentage variance not considered meaningful.

Three Months Ended March 31, 2017, compared with the Three Months Ended March 31, 2016

Consolidated Results

Consolidated revenues increased $138.5 million for the three months ended March 31, 2017, compared with the same period in 2016. Revenues were impacted by an increase in ethanol, corn oil and cattle volumes sold, plus the addition of Fleischmann's Vinegar during the fourth quarter of 2016. This was partially offset by a decrease in grain trading activity volumes and lower average realized prices for grain and cattle.

Operating income increased $40.0 million for the three months ended March 31, 2017, compared with the same period last year primarily due to increased margins on ethanol production and cattle. Interest expense increased $7.7 million for the three months ended March 31, 2017, compared with the same period in 2016, primarily due to higher average debt outstanding and borrowing costs. Income tax benefit was $2.4 million for the three months ended March 31, 2017, compared with $14.9 million for the same period in 2016.

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

Ethanol Production Segment

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

	Three Months Ended March 31,		
	2017	2016	% Variance
Ethanol produced (thousands of gallons)	326,426	246,955	32.2%
Distillers grains produced (thousands of equivalent dried tons)	877	646	35.8
Corn oil produced (thousands of pounds)	75,356	59,839	25.9
Corn consumed (thousands of bushels)	113,485	86,531	31.1

Revenues in our ethanol production segment increased $93.0 million for the three months ended March 31, 2017, compared with the same period in 2016 primarily due to higher volumes of ethanol, distillers grains and corn oil produced and higher average ethanol prices realized, partially offset by lower average distillers grains and corn oil prices realized. The increased volumes produced was primarily due to increased production at our existing ethanol plants and the acquisition of the Madison, Mount Vernon and York ethanol plants, which produced approximately 53.2 mmg of ethanol during the three months ended March 31, 2017.

Cost of goods sold for our ethanol production segment increased $64.6 million for the three months ended March 31, 2017, compared with the same period last year due to higher production volumes and higher corn prices, during the three months ended March 31, 2017. As a result of the factors identified above, operating income increased $23.0 million for the three months ended March 31, 2017, compared with the same period in 2016. Depreciation and amortization expense for the

segment was $20.3 million for the three months ended March 31, 2017, compared with $15.8 million for the same period last year.

Agribusiness and Energy Services Segment

Revenues in our agribusiness and energy services segment increased $10.3 million while operating income increased by $2.6 million for the three months ended March 31, 2017, compared with the same period in 2016. The increase in revenues was primarily due to an increase in ethanol, corn oil and natural gas trading activity and higher average realized ethanol prices, partially offset by a decrease in grain trading activity volumes and lower average realized prices for distillers grains and other grains. Operating income increased primarily as a result of increased intersegment marketing and corn origination fees.

Food and Ingredients Segment

Revenues in our food and ingredients segment increased $39.3 million for the three months ended March 31, 2017, compared with the same period in 2016. The increase in revenues was primarily due to an increase in cattle volumes sold as well as the acquisition of Fleischmann's Vinegar, partially offset by lower average realized cattle prices. Company-owned cattle on feed for the three months ended March 31, 2017 and 2016 was approximately 63,000 and 61,000 head, respectively.

Operating income increased by $11.0 million for the three months ended March 31, 2017, compared with the same period in 2016 primarily due to an increase in cattle margins, as well as the acquisition of Fleischmann's Vinegar.

Partnership Segment

Revenues generated by our partnership segment increased $3.4 million for the three months ended March 31, 2017 compared to the same period of 2016, due to higher storage and throughput volumes. Operating income increased $3.5 million for the three months ended March 31, 2017, compared with the same period in 2016 due to the higher revenues, as operations and maintenance expenses remained relatively unchanged during the three months ended March 31, 2017 compared with the same period of 2016.

Intersegment Eliminations

Intersegment eliminations of revenues increased by $7.6 million for the three months ended March 31, 2017, compared with the same period in 2016 due to the increase in storage and throughput fees paid to the partnership segment, increased intersegment distillers grain and corn oil revenues paid to the ethanol production segment and increased intersegment marketing and corn origination fees paid to the agribusiness and energy services segment.

Corporate Activities

Operating income was impacted by an increase in operating expenses for corporate activities of $0.7 million for the three months ended March 31, 2017, compared with the same period in 2016 primarily due to the consolidation of BioProcess Algae in the corporate activities segment.

Income Taxes

We recorded income tax benefit of $2.4 million for the three months ended March 31, 2017, compared with $14.9 million for the same period in 2016. The decrease in income tax benefit was due primarily to lower loss before income taxes for the 2017 period.

EBITDA

We use EBITDA to compare the financial performance of our business 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 March 31,	
	2017	**2016**
Net income (loss)	$ 1,651	$ (19,816)
Interest expense	18,496	10,798
Income tax benefit	(2,381)	(14,893)
Depreciation and amortization	26,083	18,145
EBITDA	$ 43,849	$ (5,766)

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 March 31, 2017, we had $256.5 million in cash and equivalents, excluding restricted cash, consisting of $183.2 million held at our parent company and the remainder held at our subsidiaries. We also had $129.2 million available under our revolving credit agreements, some of which were subject to restrictions or other lending conditions. Funds held by our subsidiaries are generally required for their ongoing operational needs and restricted from distribution. At March 31, 2017, our subsidiaries had approximately $886.9 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.

Net cash used by operating activities was $38.4 million for the three months ended March 31, 2017, compared with $79.8 million for the same period in 2016. Operating activities compared to the prior year were primarily affected by increased operating profits and lower adjustments for deferred income tax expense when compared to the same period of the prior year. Net cash used by investing activities was $21.4 million for the three months ended March 31, 2017, due primarily to capital expenditures at our existing ethanol plants and our vinegar operations, as well as $4.1 million paid to acquire a cattle feedlot. Net cash provided by financing activities was $12.0 million for the three months ended March 31, 2017. 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 $14.1 million in the first three months of 2017 for various maintenance and expansion projects. Capital spending for the remainder of 2017 is expected to be approximately $38.6 million for various projects, and is expected to be financed with available borrowings under our credit facilities and cash provided by operating activities.

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. On March 31, 2017, we had $28.9 million in deposits for broker margin requirements. 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 February 8, 2017, our board of directors declared a quarterly cash dividend of $0.12 per share. The dividend was paid on March 17, 2017, to shareholders of record at the close of business on February 24, 2017.

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 April 20, 2017, the board of directors of the general partner of the partnership declared a cash distribution of $0.44 per unit on outstanding common and subordinated units. The distribution is payable on May 15, 2017, to unitholders of record at the close of business on May 5, 2017.

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. There were no shares repurchased under the program during the first quarter of 2017. To date, we have repurchased 514,990 shares of common stock for approximately $10.0 million under the program.

We believe we have sufficient working capital for our existing operations. 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 8 – 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, 2016.

We were in compliance with our debt covenants at March 31, 2017. Based on our forecasts and the current margin environment, 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.

Ethanol Production Segment

Green Plains Processing has a $345.0 million senior secured credit facility which matures in June of 2020. At March 31, 2017, the outstanding principal balance was $271.4 million and our interest rate was 6.5%.

We also 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. The facility 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 March 31, 2017, the outstanding principal balance was $112.0 million on the facility and our interest rate was 4.9%.

Green Plains Grain has entered into short-term inventory financing agreements with a financial institution. At March 31, 2017, 14.8 million bushels of corn had been designated as collateral under these agreements at initial values totaling $49.6 million. We have accounted for the agreements as short-term notes, rather than sales, and have elected the fair value option to offset fluctuations in market prices of the inventory. At March 31, 2017, the short-term notes payable were valued at $50.9 million and our interest rate was 3.8%.

Green Plains Trade has a $150.0 million senior secured asset-based revolving credit facility to finance working capital up

to the maximum commitment based on eligible collateral. This facility can be increased by up to $75.0 million with agent approval. The facility matures in November of 2019. At March 31, 2017, the outstanding principal balance was $109.3 million on the facility and our interest rate was 3.5%.

Food and Ingredients Segment

Green Plains Cattle has a $100.0 million senior secured asset-based revolving credit facility to finance working capital up to the maximum commitment based on eligible collateral. At March 31, 2017, the outstanding principal balance was $63.5 million on the facility and our interest rate was 3.1%.

On April 28, 2017, we entered into an amendment of our Green Plains Cattle credit facility with a group of lenders led by Bank of the West and ING Capital LLC. The amendment was completed to fund the additional working capital requirements related to the pending acquisition of two cattle feedlots located in Leoti, Kansas and Yuma, Colorado. The amendment increases the maximum commitment from $100.0 million to $200.0 million until July 31, 2017, when it increases to $300.0 million. The maturity date is extended from October 31, 2017 to April 30, 2020.

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 amended credit facility also includes an accordion feature that enables the credit facility to be increased by up to $100.0 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. Interest is payable as required, but not less than quarterly in arrears and principal is due upon maturity.

The amended terms impose affirmative and negative covenants, including maintaining working capital of 15% of the commitment amount, tangible net worth of 20% of the commitment amount and a total debt to tangible net worth ratio of 3.50x. 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 the parent, plus unused amounts from the previous year.

Fleischmann's Vinegar has a $130.0 million senior secured term loan and a $15.0 million senior secured revolving credit facility. The facilities mature in October of 2022. At March 31, 2017, the outstanding principal balances were $129.4 million and $4.5 million on the term loan and revolving loan, respectively, and our interest rate on each of the loans was 8.0%.

Partnership Segment

Green Plains Partners, through a wholly owned subsidiary, has a $155.0 million secured revolving credit facility to fund working capital, acquisitions, distributions, capital expenditures and other general partnership purposes. The facility can be increased by up to $100.0 million without the consent of the lenders. The facility matures in July of 2020. At March 31, 2017, the outstanding principal balance was $126.5 million on the facility and our interest rate was 3.5%.

Corporate Activities

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.

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 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 $0.04 per share. The conversion rate was recently adjusted as of March 31, 2017 to 49.5785 shares of common stock per $1,000 of principal, which is equal to a conversion price of approximately $20.17 per share. We may settle the 3.25% notes in cash, common stock or a combination of cash and common stock.

On April 12, 2017, we entered into a privately negotiated agreement with a holder, on behalf of certain beneficial owners, of our 3.25% notes. Under the agreement, 1,344,298 shares of our common stock and cash in the amount of accrued

but unpaid interest on the 3.25% notes were exchanged for approximately $24.1 million in aggregate principal amount of the 3.25% notes. Following the closing of the agreement, $95.9 million aggregate principal amount of the 3.25% notes remain outstanding.

Contractual Obligations

Contractual obligations as of March 31, 2017, 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)	$ 1,186,465	$ 341,866	$ 132,348	$ 392,154	$ 320,097
Interest and fees on debt obligations (2)	208,385	59,150	84,672	42,557	22,006
Operating lease obligations (3)	112,153	35,587	40,071	16,168	20,327
Other	8,951	2,329	1,639	1,917	3,066
Purchase obligations:					
Forward grain purchase contracts (4)	264,292	254,563	6,062	2,000	1,667
Other commodity purchase contracts (5)	197,005	197,005	-	-	-
Other	25,700	9,813	15,887	-	-
Total contractual obligations	$ 2,002,951	$ 900,313	$ 280,679	$ 454,796	$ 367,163

(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, 2016.

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. Qualitative and Quantitative 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 $4.6 million per year. At March 31, 2017, we had $1.1 billion in debt, $857.0 million of which had variable interest rates.

For additional information related to our debt, see *Note 8 – 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, 2016.

Commodity Price Risk

Our business is highly sensitive to commodity price risk, particularly for ethanol, distillers grains, corn oil, corn, natural gas 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 and the New York 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 months ended March 31, 2017, revenues included net losses of $2.1 million and cost of goods sold included net gains of $15.8 million 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 March 31, 2017, 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	$ 147,782
Corn	524,000	Bushels	$ 126,317
Distillers grains	4,100	Tons (2)	$ 21,584
Corn Oil	340,000	Pounds	$ 5,706
Natural gas	41,700	MmBTU	$ 6,110

(1) Estimated volumes reflect anticipated expansion of production capacity at our ethanol plants and assumes production at full capacity.
(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 $2.6 million for grain at March 31, 2017. Our market risk at that date, based on the estimated net income effect resulting from a hypothetical 10% change in price, was approximately $0.2 million.

Food and Ingredients Segment

In the food and ingredients segment, our 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 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 March 31, 2017. 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.

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.

Under the supervision of 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 March 31, 2017, 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, 2016, including the risk factors discussion in Part I, Item 1A, "Risk Factors," and the discussion of risks and other information in this report, including "Cautionary Information Regarding Forward-Looking Statements," which is included in Part I, Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations." 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, 2016. 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.

In January 2017, the Trump administration imposed a government-wide freeze on new and pending regulations, which included the 2017 renewable volume obligations that was originally intended to go into effect on February 10, 2017, which were subsequently approved on March 20, 2017. Our operations could be adversely impacted by legislation or EPA actions that reduce the RFS II mandate. Similarly, should federal mandates regarding oxygenated gasoline be repealed, the market for domestic ethanol could be adversely impacted.

Future demand will 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, changes to RFS II which could significantly affect the market price of RINs could in turn negatively impact the price of ethanol or cause imported sugarcane ethanol to become more economical than domestic ethanol.

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. 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.

While we currently believe the new presidential administration will support the environmental laws that are currently in place, 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 ability to operate profitably.

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 first quarter of 2017:

Period	Total Number of Shares Withheld for Employee Awards		Average Price Paid per Share
January 1 - January 31	-	$	-
February 1 - February 28	160,347		23.91
March 1 - March 31	460		24.30
Total	160,807	$	23.91

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. There were no shares repurchased under the program during the first quarter of 2017. Approximately $90.0 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, dated as of April 25, 2017, by and among Green Plains Cattle Company LLC, and Cargill Cattle Feeders, LLC. (Incorporated by reference to Exhibit 2.1 to the company’s Current Report on Form 8-K dated April 26, 2017)
10.1	Second Amendment to the Credit Agreement, dated April 28, 2017, among Green Plains Cattle Company LLC, Bank of the West and ING Capital LLC, as Joint Administrative Agents, and the lenders party to the Credit Agreement (Incorporated by reference to Exhibit 10.1 to the company’s Current Report on Form 8-K dated May 1, 2017)
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 March 31, 2017, 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

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: May 4 2017

By: */s/ Todd A. Becker*
Todd A. Becker
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 4, 2017

By: */s/ Jerry L. Peters*
Jerry L. Peters
Chief Financial Officer
(Principal Financial Officer)

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) AND SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Todd A. Becker, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Green Plains Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 4, 2017

/s/ Todd A. Becker
Todd A. Becker
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) AND SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jerry L. Peters, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Green Plains Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 4, 2017

/s/ Jerry L. Peters
Jerry L. Peters
Chief Financial Officer
(Principal Financial Officer)

Exhibit 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

In connection with the Quarterly Report of Green Plains Inc. (the "company") on Form 10-Q for the fiscal quarter ended March 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Todd A. Becker, President and Chief Executive Officer of the company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 4, 2017

/s/ Todd A. Becker
Todd A. Becker
President and Chief Executive Officer

Exhibit 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**

In connection with the Quarterly Report of Green Plains Inc. (the "company") on Form 10-Q for the fiscal quarter ended March 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jerry L. Peters, Chief Financial Officer of the company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: May 4, 2017

/s/ Jerry L. Peters
Jerry L. Peters
Chief Financial Officer