



Green Plains

**Credit Suisse Energy Conference**

March 4, 2020

# Forward-Looking Statements

This presentation includes forward-looking statements that reflect management's current views of company performance, industry conditions and future economic environment. These statements are based on assumptions and various factors that are subject to risks and uncertainties.

Green Plains has provided additional information about such risks and uncertainties that could cause actual results to differ materially from those expressed or implied in its reports filed with the Securities and Exchange Commission. Green Plains is not obligated nor intends to update its forward-looking statements at any time unless it is required by applicable securities laws. Unpredictable or unknown factors not discussed in this presentation could also have material adverse effects on forward-looking statements.

# Fourth Quarter Results

## ▪ Results of Operations

- Adjusted net loss of \$14.4 million, or (\$0.41) per diluted share
- Adjusted EBITDA of \$16.0 million
- Cash, cash equivalents and restricted cash of \$269.9 million; availability under revolving credit agreements of \$289.7 million at Dec. 31, 2019
- Total long-term debt of \$376.5 million; including \$132.1 million of Green Plains Partners debt
- Net debt zero, excluding working capital financing and non-recourse partnership debt

## ▪ Production Segment

- Processed 83.4 million bushels of corn
- Sold 239.1 million gallons of ethanol, or 84.5% of capacity
- Sold 633,000 tons of dried distillers grains (dry equivalent)
- Sold 63.4 million pounds of corn oil
- Consolidated ethanol crush margin was \$4.2 million, or \$0.02 per gallon

# Business Activity

- Project 24 upgrade completed at Wood River, NE plant and is now at full production and exceeding operating cost reduction expectations
- Repurchased 0.5 million shares for \$5.8 million during Q4, bringing the total for FY 2019 to 5.4 million shares for approximately \$61.6 million
- The company's board of directors approved an additional \$100.0 million authorization to repurchase shares and as of Dec 31, 2019, \$118.6 million remained available
- Green Plains Inc. completed the sale of its joint venture interest in JGP Energy Partners LLC back to its partner, Jefferson Energy Holdings LLC for \$29 million plus estimated working capital
- Green Plains signed exclusive partnership and commercialization agreement with Novozymes for biological solutions to produce high protein and novel ingredients for the global protein market
- Reached agreement with a third party to sell 60% of high protein production from the company's Shenandoah processing plant which has since been expanded
- Opened an aquaculture research center through Optimal Aqua joint venture for testing and trials of high protein ingredients and novel feeds

# Transforming Green Plains

## ▪ **Portfolio Optimization Strengthened our Balance Sheet**

- Realized ~ \$780million in proceeds from asset sales over previous five quarters
- Debt reduced or deconsolidated by nearly \$1 billion
- Continue to have strong liquidity position with \$270 million in cash

## ▪ **Stock Repurchase Program**

- For 2019, Green Plains Inc. repurchased approximately 5.4 million shares for approximately \$61.6 million
- Repurchased \$11.5 million in shares during Q1 2020

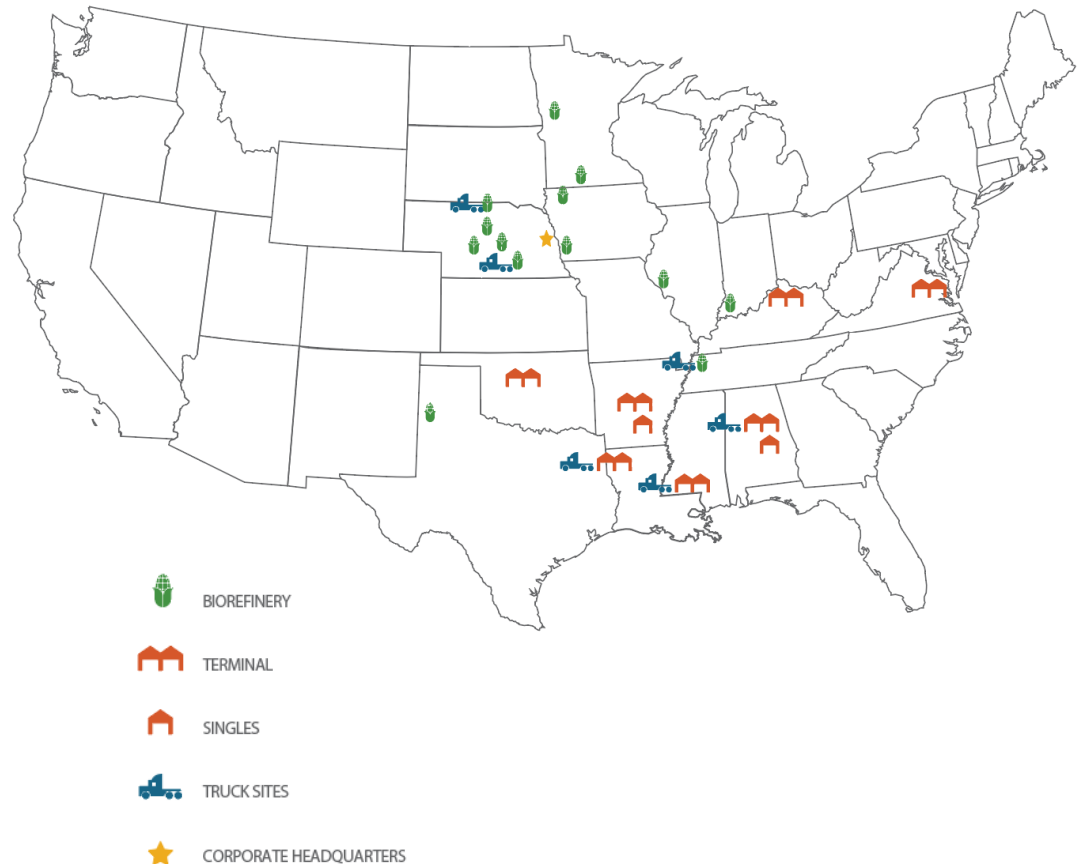
## ▪ **Investing in our Future**

- Project 24 on a path to be complete by end of Q3 2020
- Investing in High Protein, with Shenandoah fully online in March
- Creating sustainable efficacious co-products to drive higher and more resilient margins
- Aligning protein production and feed strategy through Novozymes partnership, Optimal Aqua, and key strategic players

# Green Plains Today

- One of the leading corn processors in the world
  - Own and operate 13 biorefineries
  - Process 11 million tons of corn annually that can produce:
    - 1.123 billion gallons of biofuel
    - 2.9 million tons of distillers grains
    - 300 million pounds of corn oil
    - High protein corn meal
- Own 50% interest in Green Plains Cattle Company
  - 4<sup>th</sup> largest cattle feeder in the U.S.
- Green Plains Partners
  - Own 49.0% of MLP formed in 2015
  - Annual distribution of \$1.90 per unit with a 1.00x coverage ratio

## Strategically Located Assets

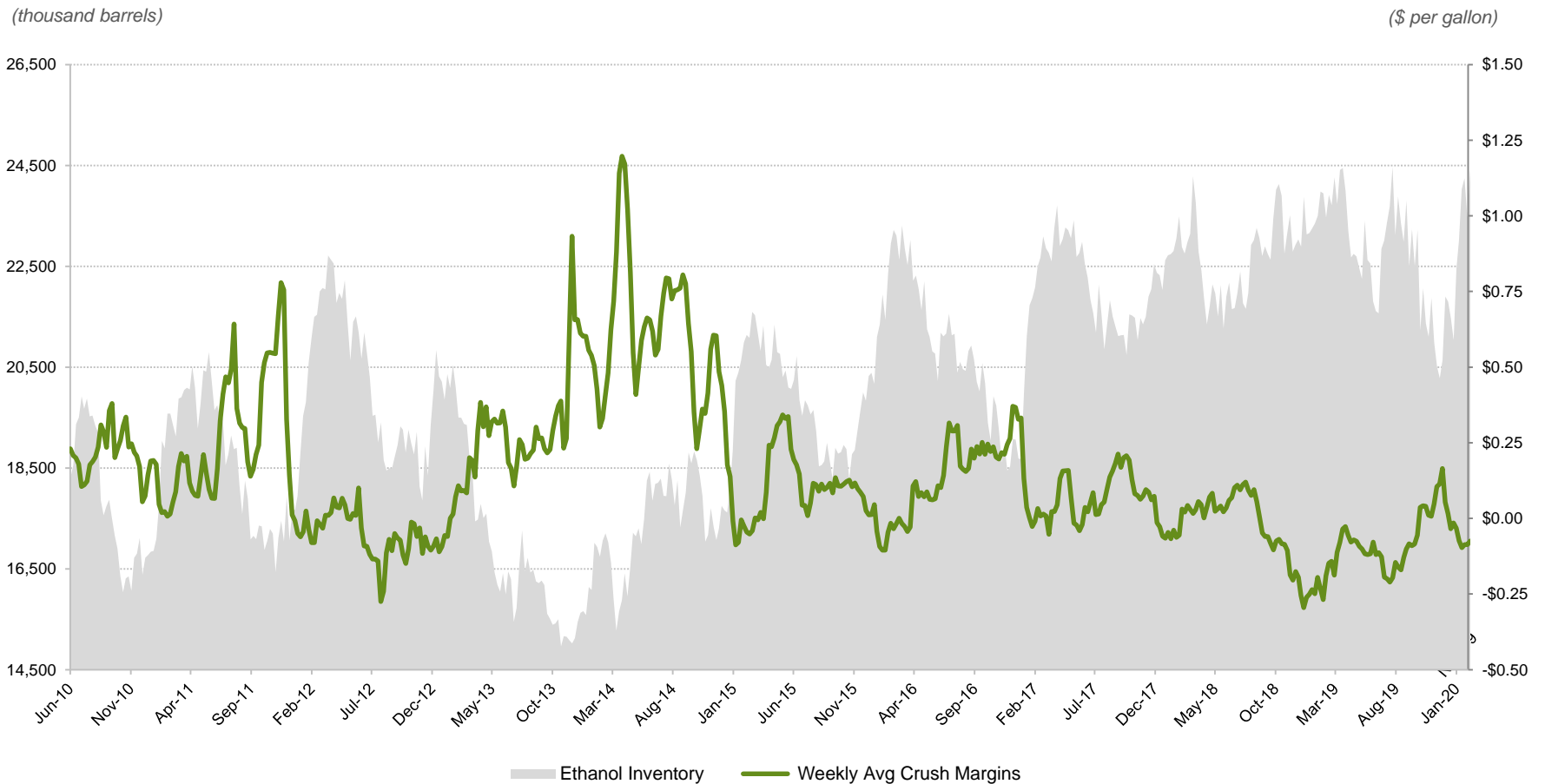


# Industry & Regulatory Update



Green Plains

# Margins in the Current Environment



Source – Energy Information Administration as of February 21, 2020, Company estimates



# Regulatory & Trade Perspective

## ▪ **Prior Headwinds**

- Small Refinery Exemptions
  - Total of 85 waivers granted for compliance years 2016, 2017 and 2018
  - Over 4 billion gallons stripped from renewable fuels mandate
- Lack of access for E15
- China has been out of the market

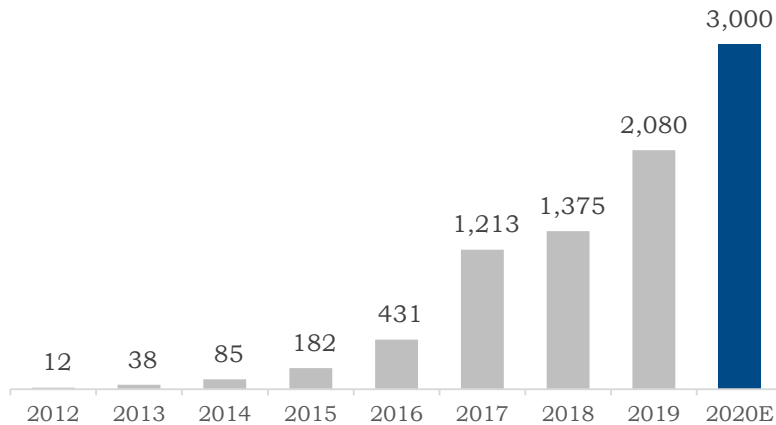
## ▪ **Potential Tailwinds**

- 2020 Renewable Volume Obligations
  - 15 billion gallons = 15 billion gallons
  - Watching EPA and 10<sup>th</sup> Circuit Court
- Trade
  - Expect 1.5 billion gallons of exports in 2020, in line with 2019
  - Exports to China could increase this number significantly due to Trade Agreement
- At existing margins, anticipate supply being reduced
- \$100 million in USDA Funding for higher blends
- E15 available year round, with potential for EPA to allow E15 in E10 infrastructure

# Driving Demand Through Higher Blends

- E15 is offered at 2,070 stations in 30 states and growing<sup>1</sup>
- Expect 3,000 sites by end of 2020<sup>1</sup>
- Automakers approve the use of E15 in more than 90% of 2020 models<sup>2</sup>
- \$100 million of USDA infrastructure funding to accelerate rollout
- EPA reviewing E15 through E10 infrastructure and labeling

## US Retail Stations Selling E15<sup>(1)</sup>



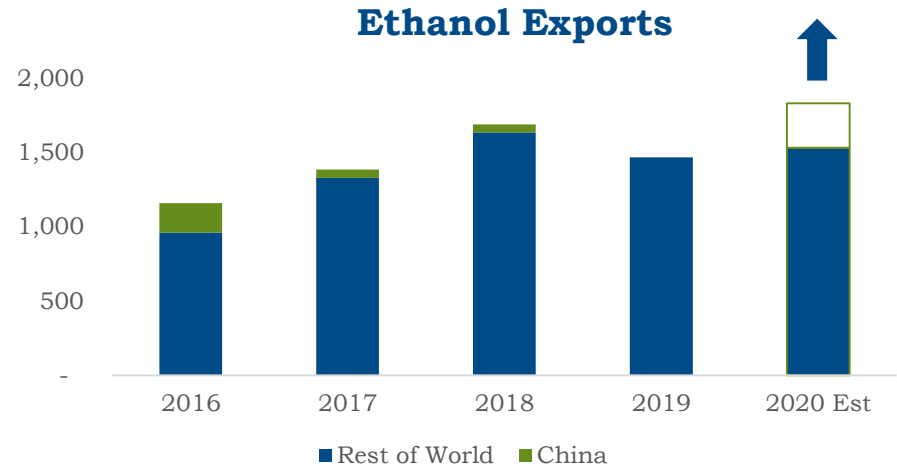
1) Source: Growth Energy as of Jan 31, 2020

2) Source: based on analysis by RFA

# Driving Demand Through Higher Exports

## Ethanol Exports

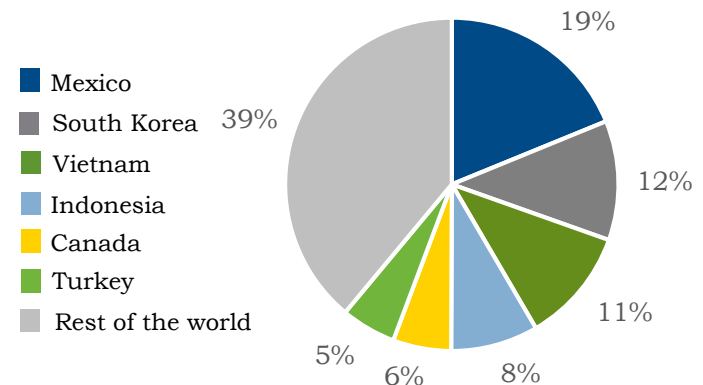
- Anticipate 1.5 billion gallons of exports in 2019, excluding China
- Brazil and Canada accounted for ~45% of exports in 2019
- China could easily take 300 million gallons or more in 2020



## Distillers Exports

- 10.8 million metric tons of DDGs exported in 2019, or ~25% of production
- Mexico, Vietnam, South Korea and Thailand accounted for ~41% of exports
- Anticipate exports to grow in 2020 as China comes back into the market

## 2019 Distillers Exports



Source – USDA Foreign Agricultural Service and Company Estimates

# Business Update



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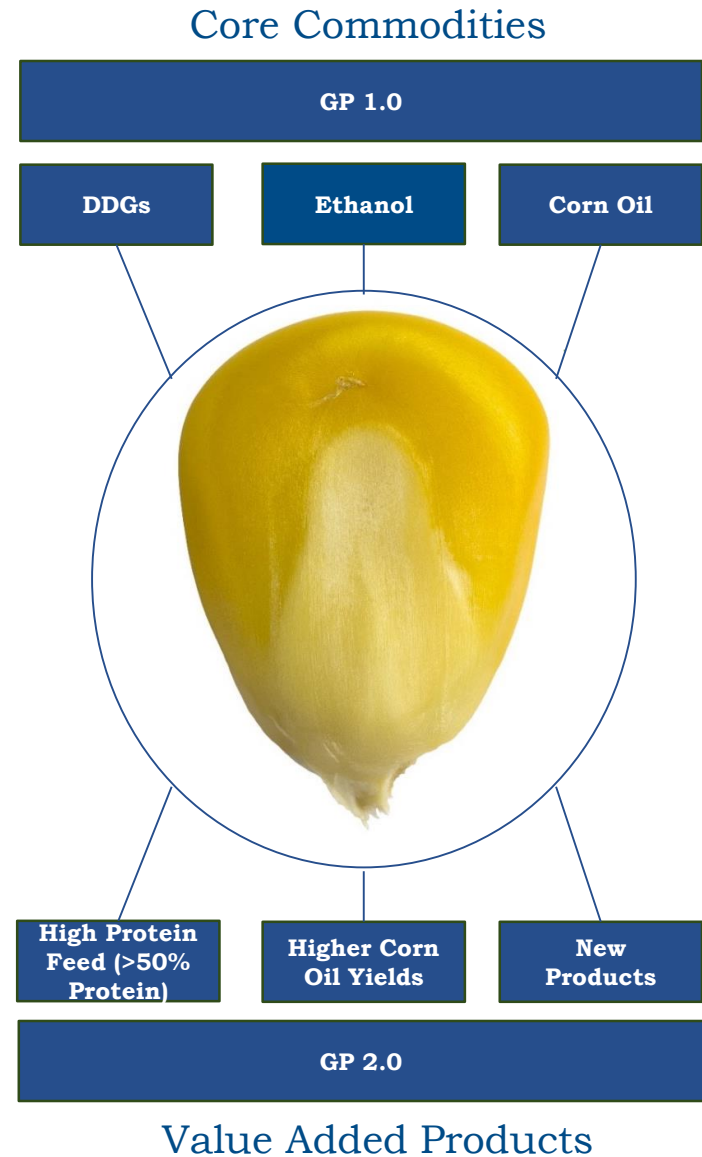
# Total Transformation Plan

## ▪ Our processing plants as biorefineries

- Use mechanical and enzymatic processes to “crack” a commodity into its most valuable components
- Aligned with key technology players through exclusive collaborative partnerships to drive transformation

## ▪ Extracting more value

- Focus on driving higher values from what we process every day:
  - Production of higher protein
  - Better corn oil yields
  - Improved distillers grains
  - Lower operating costs
  - Optimizing valued components



# Total Transformation Plan: Key Drivers

## ▪ **Global Protein Demand**

- World demand for protein is growing across every major sector driven by population growth, economics and availability
- The growing population needs inexpensive proteins sourced from every animal sector, and most significantly from the most efficient converter of feed to protein - FISH

## ▪ **Escape Velocity from Policy**

- High protein and novel feed ingredients are not held hostage by political policies

## ▪ **Technology**

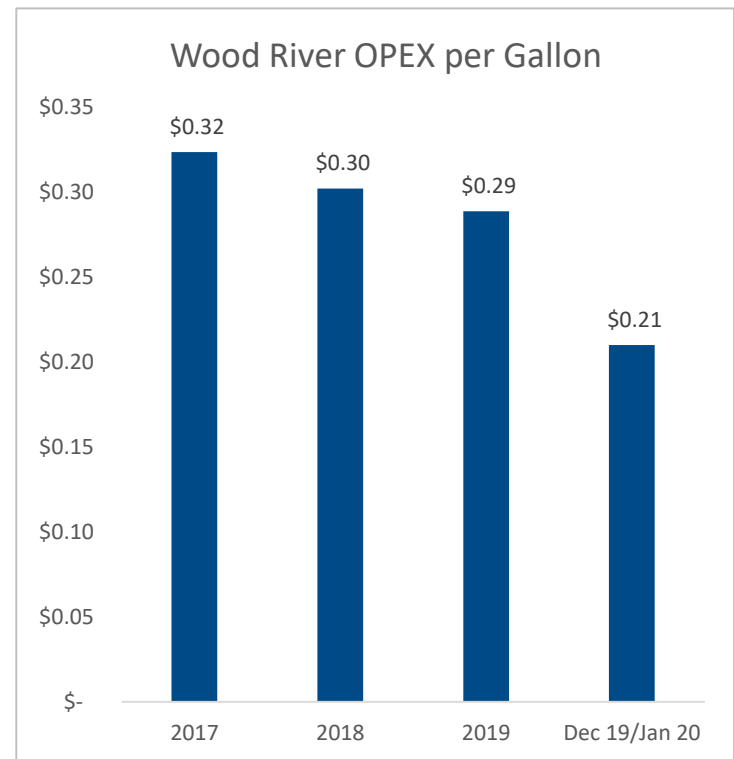
- Our technological partners and strategic customers are working with us to accelerate transformation
- Technological advancements in both mechanical separation and enzymatic processes are driving the evolution of higher value products

## ▪ **Economics**

- Suppressed ethanol margins have driven a need for continued development in other areas to extract even higher values from constituent components and new product evolution
- Significant opportunity to develop new and more resilient revenue streams from what we do every day

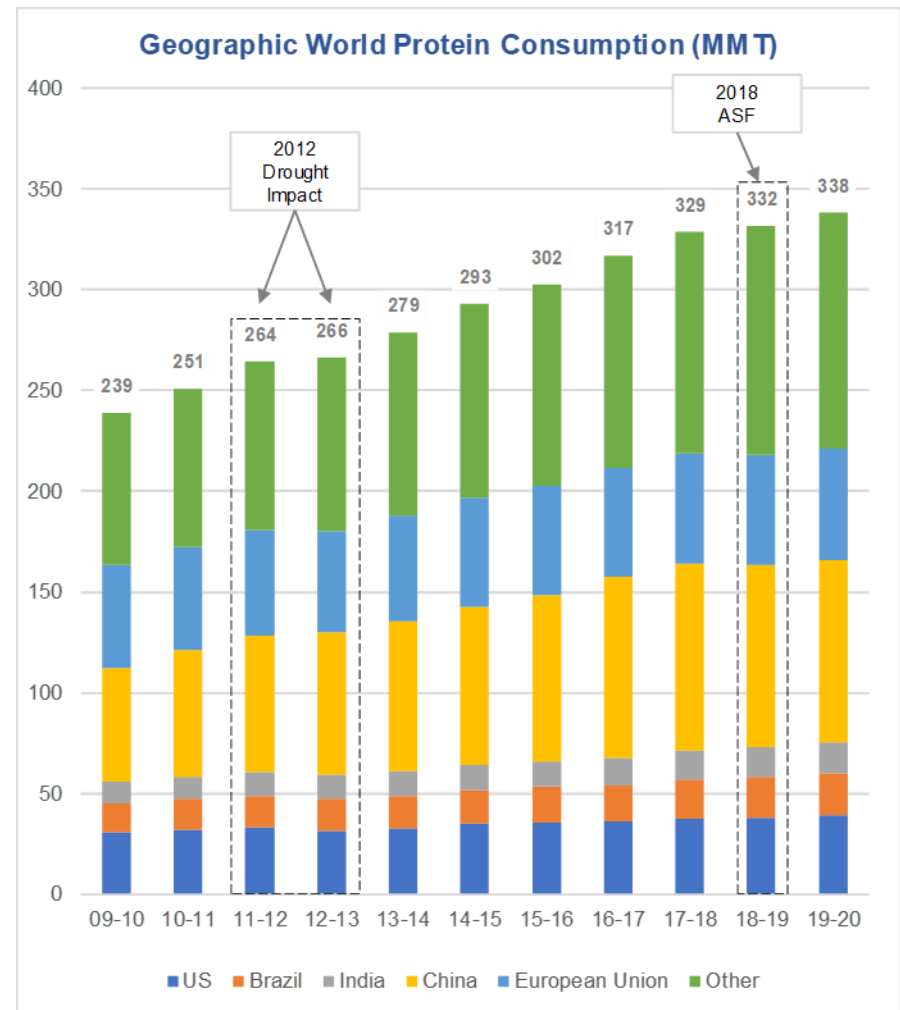
# Total Transformation - Project 24 Returning to Operational Excellence

- Developed an exclusive partnership with ICM to develop technology that will drive operational costs savings, and reduce energy consumption at our non-ICM plants
- Project 24 will give us a distinct advantage in operational costs and transform Green Plains into a low cost, low carbon, closed loop sustainable biofuels producer
- Anticipate being a top 15% or 20% low cost producer upon completion
- Our first Project 24 modification at Wood River, NE location was completed in November 2019, with the remaining seven plants estimated to be completed by the 3<sup>rd</sup> quarter 2020
- Capital cost per gallon is \$0.08 or \$0.09 per gallon with a one year payback



# World Protein Demand is Growing

- World demand in protein is growing across every major sector driven by population growth, economics and availability
- Increase protein production without acreage expansion
- Installing Fluid-Quip Process Technology, Maximized Stillage Co-Products™ System, a bolt-on technology to provide initial hi-pro technology at our Shenandoah, IA plant
- Produce 50% protein animal feed ingredients from at least 20% of distillers grains produced today



Source – USDA World Protein Report  
MMT is defined as million metric tons



# Continuing to Extract Value From the Corn Kernel through Hi-Protein Investments

- The world turns to corn for scalable protein without acreage expansion
- Green Plains leading the conversion to a true biorefinery
- Protein can provide a consistent margin uplift of \$0.15 per gallon at the base 50 pro
- Executed a term sheet with one of the premier pet food raw material processors and suppliers in the industry
- Potential through enzyme and yeast technology to further enhance value by producing feeds that exceed 50% protein content

# Using Partnerships to further enhance values

- Exclusive partnership with Novozymes provides the expertise through enzyme and yeast technology to further enhance value by producing feeds that exceed 50% protein content
- Optimal Aquafeed partnership focuses on Aquaculture- one of the most sustainable and efficient sources of animal protein for human consumption
- Optimal Aquafeed will be used as a platform to introduce sustainable high protein novel ingredients into the aquaculture space
- Leverage Optimal Aquafeed's world class Aqualab in Shenandoah to prove value of our product while establishing valuable customer/producer relationships

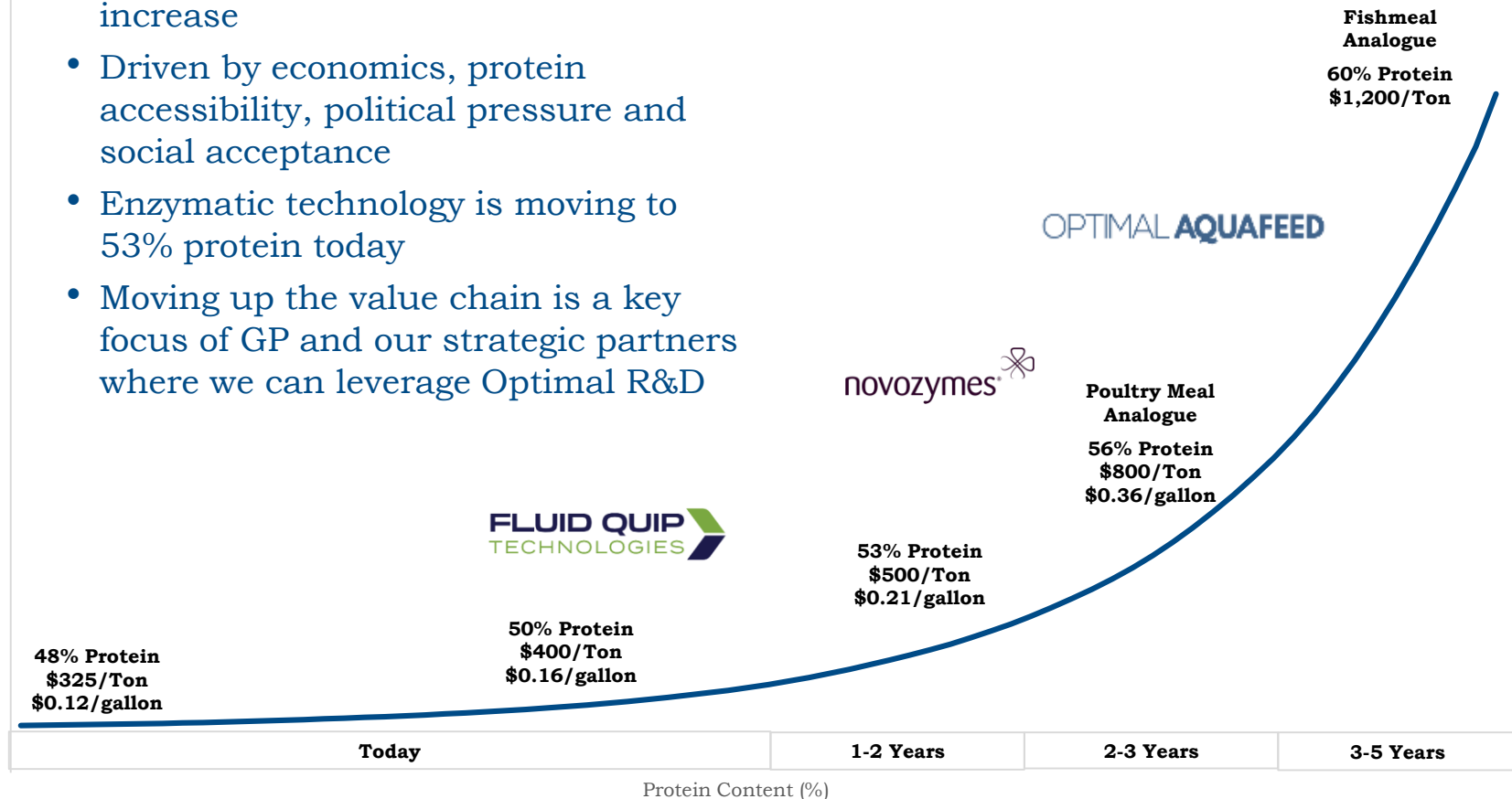
# Potential for Higher Margins Enhance Opportunity

J-Curve of Protein Opportunity

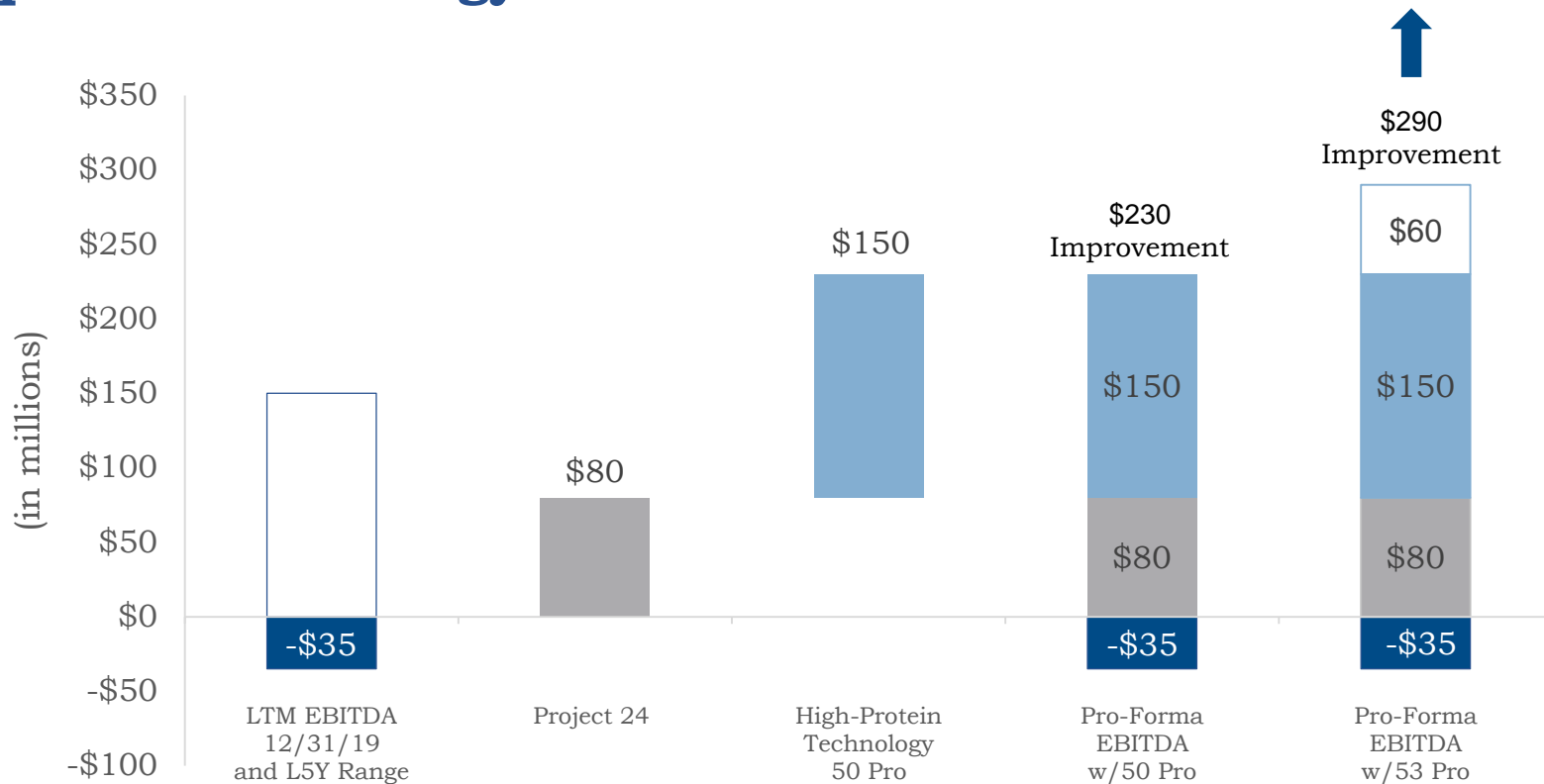
Gen II Developments

- Global demand for analogues that meet specific dietary needs will increase
- Driven by economics, protein accessibility, political pressure and social acceptance
- Enzymatic technology is moving to 53% protein today
- Moving up the value chain is a key focus of GP and our strategic partners where we can leverage Optimal R&D

Feed Price (\$ / Ton)



# Significant margin potential exists from Project 24 and high-protein technology



## Assumptions:

- Assets produce at 90% of capacity on 1.123 billion gallons
- Project 24 with operating expense of \$0.24/gallon across the platform
- Crush margin lift of \$0.15/gallon for high-protein technology at base 50 Pro; \$0.21/gallon at 53 Pro; \$0.36 at 56 Pro
- Project 24 ~ \$60 million & High-Protein ~ \$350 - \$450 million of capital investment based on 13 ethanol plants

## **In Closing**

Green Plains is executing a Total Transformation Plan to unlock and capture significant value imbedded in our platform through of cost efficiencies and technological advances in protein that will transform our company over the next 18 to 36 months and help meet the worlds growing need for sustainable low carbon fuels and sustainable protein feeds.

# Appendix



# **Green Plains Inc.**



Green Plains

# Selected Operating Data

## Green Plains Inc.

(in thousands)

<b>For the three months ended</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2018</b>
<b>Ethanol production</b>		
Ethanol sold (gallons)	239,087	205,115
Distillers grain sold (equivalent dried tons)	633	536
Corn oil sold (pounds)	63,441	53,305
Corn consumed (bushels)	83,444	70,689
<b>Agribusiness and energy services</b>		
Domestic ethanol sold (gallons)	290,543	194,037
Export ethanol sold (gallons)	96,933	91,820
	387,476	285,857
<b>Partnership</b>		
Storage and throughput (gallons)	240,092	208,063



# Consolidated Crush Margin

## Green Plains Inc.

For the three months ended Dec. 31,	2019	2018	2019	2018
	(in millions)		(per gallon produced)	
Ethanol production:				
Operating loss	\$(31.2)	\$(51.1)	\$(0.13)	\$(0.25)
Depreciation and amortization	16.7	14.9	0.07	0.07
Total ethanol production	(14.5)	(36.2)	(0.06)	(0.18)
Intercompany fees, net:				
Storage and logistics (partnership)	12.6	14.4	0.05	0.08
Marketing and agribusiness fees (agribusiness and energy services)	6.1	5.0	0.03	0.02
Consolidated crush margin	\$4.2	\$(16.8)	\$0.02	\$(0.08)

# Select Balance Sheet Data

## Green Plains Inc.

(in millions, except per share amounts)

<b>For the period ending</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2018</b>
Cash, cash equivalents and restricted cash	<b>269.9</b>	<b>283.3</b>
Working capital <sup>(1)</sup>	193.2	308.2
Working capital financing <sup>(2)</sup>	(187.8)	(163.8)
Working capital, net	5.4	144.4
<b>Net investment in cash and working capital</b>	<b>\$275.3</b>	<b>\$427.7</b>
<b>Long-term assets &amp; liabilities</b>		
Property and equipment, net	827.3	815.2
Other long-term assets <sup>(3)</sup>	203.0	194.6
Total long-term assets	1,030.3	1,009.8
Long-term debt <sup>(4)</sup>	<b>376.5</b>	<b>352.9</b>
Other long-term liabilities <sup>(5)</sup>	63.8	21.6
Total long-term liabilities	440.3	374.5
Net long term investments	590.0	635.3
<b>Total cash and invested capital</b>	<b>\$715.6</b>	<b>\$802.2</b>
Book value per share	21.48	23.04

(1) Working capital calculation for 12/31/18 has been impacted by the reclassification of current assets of discontinued operations of \$479.4 million and current liabilities of discontinued operations of \$418.9 million.

(2) Working capital financing consists of revolvers for grain-\$40.0m, trade-\$138.2m, commodity mgmt-\$9.6m

(3) Other long-term assets include \$52.5 million of operating right-of-use assets as of 12/31/19 and \$73.1 million related to the noncurrent assets of discontinued operations of GPCC as of 12/31/18.

(4) Long-term debt includes Green Plains Partners outstanding credit facility and convertible notes. GPP-\$132.1m, convertible debt-\$232.8m and other-\$16.5. The entire balance of the GPP revolver is classified as current maturities of long-term debt on the consolidated balance sheet.

(5) Other long-term liabilities include \$38.3 million of long-term operating lease liabilities and \$16.6 million of current operating lease liabilities as of 12/31/19 and \$0.1 million of noncurrent liabilities and discontinued operations as of 12/31/18.

# Condensed Income Statement

## Green Plains Inc.

*(in millions, except per share amounts)*

<b>For the three months ended</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2018</b>
Revenues	\$715.7	\$583.5
Costs and expenses	730.6	480.6
Operating income (loss)	(14.9)	102.9
Other expense	(2.3)	(28.3)
Income tax expense	(19.5)	(14.5)
Income (loss) from equity method investees	2.3	(0.1)
Net loss from discontinued operations	-	(0.2)
Net income (loss)	(34.5)	59.9
Net income attributable to noncontrolling interests	5.3	6.4
Net income (loss) attributable to Green Plains	\$(39.7)	\$53.5
Net income (loss) attributable to Green Plains per share – diluted	\$(1.13)	\$1.13

\* The above tables may include immaterial rounding adjustments to foot.

# Green Plains Partners LP



Green Plains

# Selected Operating Data

## Green Plains Partners LP

*(in million gallons)*

<b>For the three months ended</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2018</b>
Product volumes		
Storage and throughput services	240.1	208.0
Terminal services	55.4	57.9
Railcar capacity billed (daily average)	77.7	91.8

# Condensed Balance Sheet

## Green Plains Partners LP

(in millions)

<b>Assets</b>	<b>Dec. 31, 2019</b>	<b>Dec 31, 2018</b>
Current assets	\$17.4	\$16.6
Property and equipment, net	37.4	40.9
Operating lease right-of-use assets	35.5	-
Other assets	15.4	23.6
<b>Total assets</b>	<b>\$105.7</b>	<b>\$81.1</b>
<b>Liabilities and Partners' Deficit</b>		
Current liabilities	\$155.8	\$8.2
Long-term debt	-	142.0
Operating lease long-term liabilities	23.1	-
Other liabilities	2.5	3.4
<b>Total liabilities</b>	<b>181.4</b>	<b>153.6</b>
Partners' deficit	(75.7)	(72.5)
<b>Total liabilities and partners' deficit</b>	<b>\$105.7</b>	<b>\$81.1</b>

# Consolidated Income Statement

## Green Plains Partners LP

*(in millions, except per unit amounts)*

<b>For the three months ended</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2018</b>
Revenues	\$20.3	\$23.3
Operating expenses	8.0	7.2
Operating income	12.3	16.1
Interest expense and other	(2.0)	(2.0)
Income tax expense	(0.1)	-
Income from equity method investee	0.2	-
Net income	\$10.4	\$14.1
Earnings per limited partner unit – basic and diluted	\$0.44	\$0.51

<b>Supplemental revenue data</b>		
Storage and throughput services	\$11.8	\$13.3
Railcar transportation services	5.1	6.3
Terminal services	2.3	2.5
Trucking and other	1.1	1.2
Total revenues	\$20.3	\$23.3

# Adjusted EBITDA and DCF

## Green Plains Partners LP

(in millions)

	For the three months ended		LTM ended
	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019
Net income	\$10.4	\$14.1	\$41.5
Interest expense	2.0	2.0	8.3
Income tax expense	0.1	0.1	0.2
Depreciation and amortization	0.7	1.0	3.4
Transaction costs	-	0.5	-
Unit-based compensation expense	0.1	0.1	0.3
Proportional share of EBITDA adjustments of equity method investee <sup>(1)</sup>	-	0.1	0.2
Gain on assignment of operating leases <sup>(2)</sup>	-	(2.7)	-
Adjusted EBITDA	13.3	15.2	53.9
Interest paid or payable	(2.0)	(2.0)	(8.3)
Income taxes paid or payable	(0.1)	(0.1)	(0.2)
Maintenance capital expenditures	-	-	(0.1)
Distributable cash flow	\$11.2	\$13.1	\$45.3
Distributions declared <sup>(3)</sup>	\$11.3	\$11.3	\$45.1
Coverage ratio	0.99x	1.16x	1.00x

(1) Represents our proportional share of depreciation and amortization of our equity method investee.

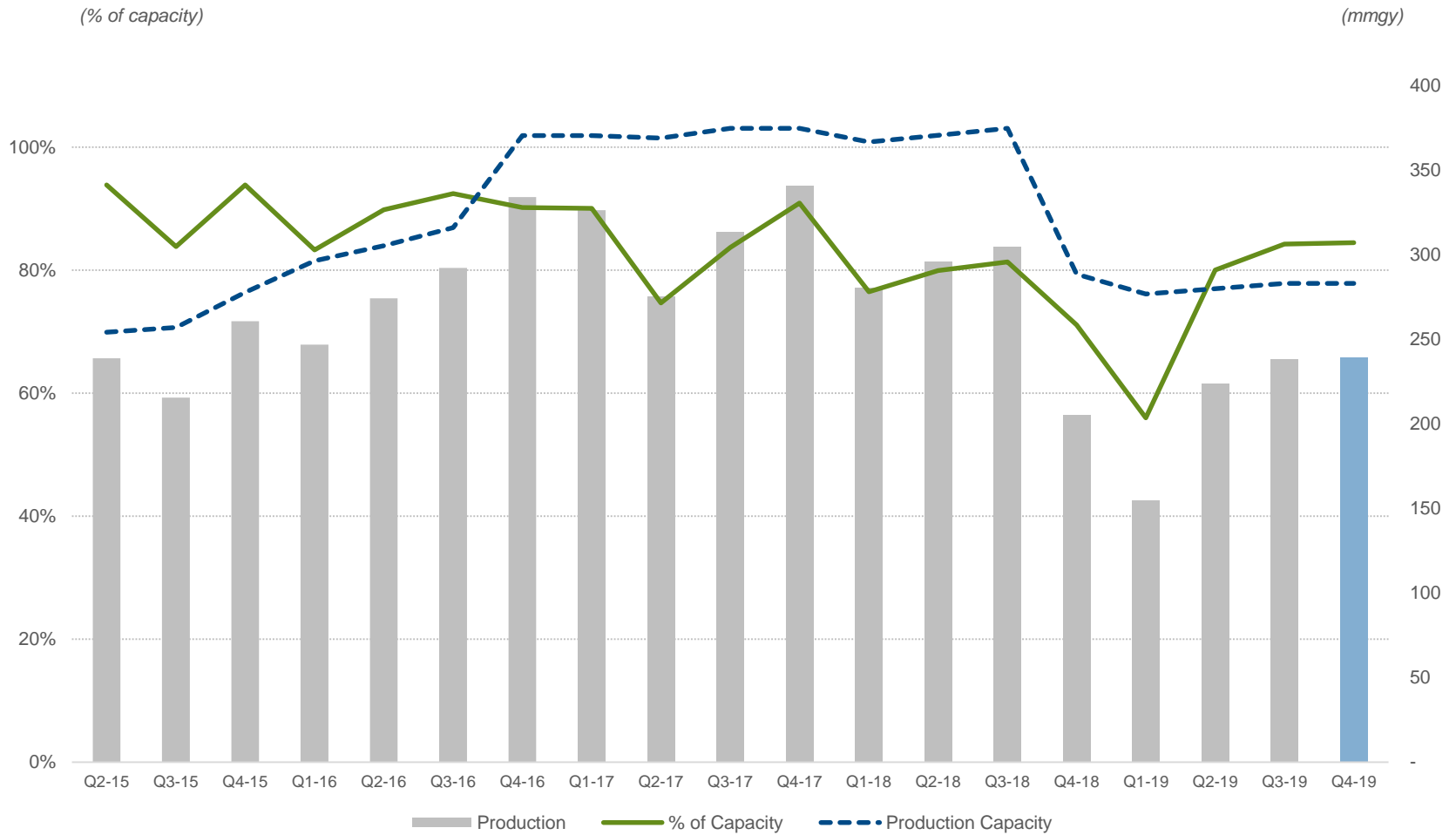
(2) Consideration received related to the assignment of railcar operating leases to Valero Renewable Fuels Company, LLC in the fourth quarter of 2018.

(3) Distributions declared for the applicable period and paid in the subsequent quarter.



# Production and Utilization History

## Green Plains Inc.



# Non-GAAP Reconciliation

## Green Plains Inc.

*(in millions)*

<b>For the three months ended</b>	<b>Dec. 31, 2019</b>	<b>Dec. 31, 2018</b>
Net income (loss) from continuing operations including noncontrolling interest	\$(34.5)	\$60.1
Interest expense	8.7	29.1
Income tax expense (benefit)	19.5	14.5
Depreciation and amortization	19.2	18.1
EBITDA	12.9	121.8
EBITDA adjustments related to discontinued operations	-	5.9
Proportional share of EBITDA adjustments of equity method investees	3.1	0.3
Adjusted EBITDA	\$16.0	\$128.0



# Green Plains

**Green Plains Inc. | NASDAQ: GPRE | [www.gpreinc.com](http://www.gpreinc.com)**

**Green Plains Partners LP | NASDAQ: GPP | [www.greenplainspartners.com](http://www.greenplainspartners.com)**