Ingredion

Second Quarter 2020 Earnings Call

Jim Zallie
President and CEO

James Gray
Executive Vice President and CFO

Forward-looking Statements

This presentation contains or may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The Company intends these forward-looking statements to be covered by the safe harbor provisions for such statements.

Forward-looking statements include, among others, any statements concerning the Company's expectations regarding impacts of COVID-19, savings under the Cost Smart program, and the Company's effective tax rates and capital expenditures for 2020 and any assumptions, expectations or beliefs underlying the foregoing. These statements can sometimes be identified by the use of forward looking words such as "may," "will," "should," "anticipate," "assume," "believe," "plan," "project," "estimate," "expect," "intend," "continue," "pro forma," "forecast," "outlook," "propels," "opportunities," "potential," "provisional," or other similar expressions or the negative thereof. All statements other than statements of historical facts in this presentation or referred to in this presentation are "forward-looking statements."

These statements are based on current circumstances or expectations, but are subject to certain inherent risks and uncertainties, many of which are difficult to predict and are beyond our control. Although we believe our expectations reflected in these forward-looking statements are based on reasonable assumptions, investors are cautioned that no assurance can be given that our expectations will prove correct.

Actual results and developments may differ materially from the expectations expressed in or implied by our forward looking statements as a result of the following risks and uncertainties, among others: changing consumption preferences and perceptions, including those relating to high fructose corn syrup; the effects of global economic conditions and the general political, economic, business, and market conditions that affect customers and consumers in the various geographic regions and countries in which we buy our raw materials or manufacture or sell our products, including, particularly, economic, currency and political conditions in South America and economic and political conditions in Europe, and the impact these factors may have on our sales volumes, the pricing of our products, our access to credit markets and our ability to collect our receivables from customers; adverse changes in investment returns earned on our pension assets; future financial performance of major industries which we serve and from which we derive a significant portion of our sales, including the food, beverage, animal nutrition, and brewing industries; the uncertainty of acceptance of products developed through genetic modification and biotechnology; our ability to develop or acquire new products and services at rates or of qualities sufficient to meet expectations; changes in U.S. and foreign government policy, laws or regulations and costs of legal compliance; increased competitive and/or customer pressure in the corn-refining industry and related industries, including with respect to the markets and prices for our primary products and our co-products, particularly corn oil; the availability of raw materials, including potato starch, tapioca, gum Arabic and the specific varieties of corn upon which some of our products are based, and our ability to pass on potential increases in the cost of corn or other raw materials to customers; raw material and energy costs and availability; our ability to contain costs, achieve budgets and to realize expected synergies, including with respect to our ability to complete planned maintenance and investment projects on time and on budget, and to achieve expected savings under our Cost Smart program as well as with respect to freight and shipping costs; the impact of financial and capital markets on our borrowing costs, including as a result of foreign currency fluctuations, fluctuations in interest and exchange rates and market volatility and the associated risks of hedging against such fluctuations; the potential effects of climate change; our ability to successfully identify and complete acquisitions or strategic alliances on favorable terms as well as our ability to successfully integrate acquired businesses or implement and maintain strategic alliances and achieve anticipated synergies with respect to all of the foregoing; operating difficulties at our manufacturing plants or with respect to boiler reliability; risks related to product safety and quality and compliance with environmental, health and safety, and food safety laws and regulations; economic, political and other risks inherent in operating in foreign countries with foreign currencies and shipping products between countries, including with respect to tariffs, quotas and duties; interruptions, security breaches or failures that might affect our information technology systems, processes and sites; our ability to maintain satisfactory labor relations; the impact that weather, natural disasters, war or similar acts of hostility, acts and threats of terrorism, the outbreak or continuation of pandemics such as COVID-19 and other significant events could have on our business; the potential recognition of impairment charges on goodwill or long lived assets; changes in our tax rates or exposure to additional income tax liabilities; and our ability to raise funds at reasonable rates to grow and expand our operations.

Our forward-looking statements speak only as of the date on which they are made and we do not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date of the statement as a result of new information or future events or developments. If we do update or correct one or more of these statements, investors and others should not conclude that we will make additional updates or corrections. For a further description of these and other risks, see "Risk Factors" included in our Annual Report on Form 10-K for the year ended December 31, 2019 and Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020 and in our subsequent reports on Form 10-Q and Form 8-K.

Agenda

- Second quarter performance in a challenging environment
- Year-to-date performance
- DrivINGRowth Roadmap: Specialty Investments
- Questions and Answers

Ingredion

COVID-19 Update

Our **Priorities** Remain Clear

1. Maintaining the Health and Safety of our Employees
2. Proudly Supporting our Communities
3. Business Continuity to Serve our Customers

Q2 2020 - A Challenging Environment

Net Sales

(13)%

Absent FX impacts
(9)%

Adjusted Operating Income

(29)%

Absent FX impacts
(25)%

North America

- Net Sales (13)%
- Operating Income (27)%

South America

- Net Sales (19)%
- Operating Income (19)%

Asia-Pacific

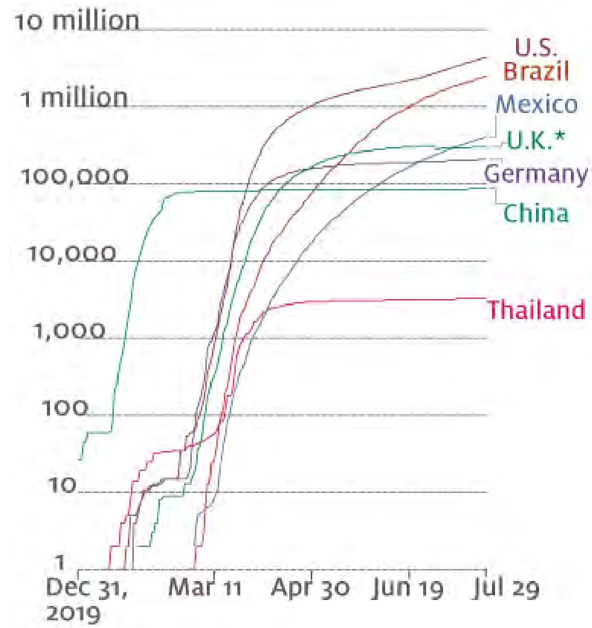
- Net Sales (8)%
- Operating Income (4)%

EMEA

- Net Sales (8)%
- Operating Income (9)%

Cumulative confirmed COVID-19 cases

The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



*May 20 methodology change

Source: European CDC - Situation Update Worldwide - Last updated 29 July, 10:14 (London time)
16.71M total confirmed cases globally as of 7/29/20

https://ourworlddata.org/coronavirus-data

Q2: North America

Net Sales

- Down (13)%
  - Partially offset by favorable price mix

Operating Income

(27)%

$101MM

- Sales declines and unfavorable fixed cost absorption

Performance Insights

US/Canada
- Significantly lower away-from-home consumption impacted sweetener and food starch sales
- Partially offset by increased sales to larger customers which serve grocery channels

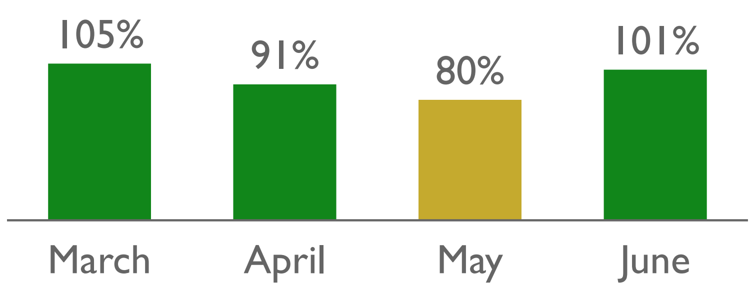
Mexico
- Brewery customers shutdown in April and May

Ingredion

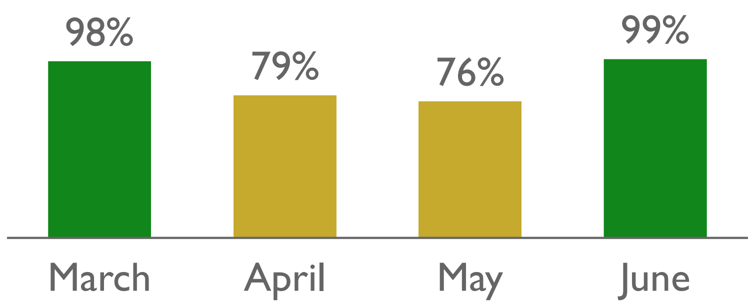
Monthly Net Sales Trend: North America

US/Canada

Total sales vs PY

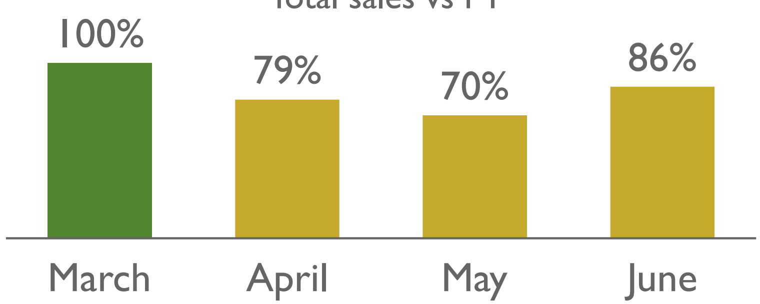


Sweeteners sales vs PY

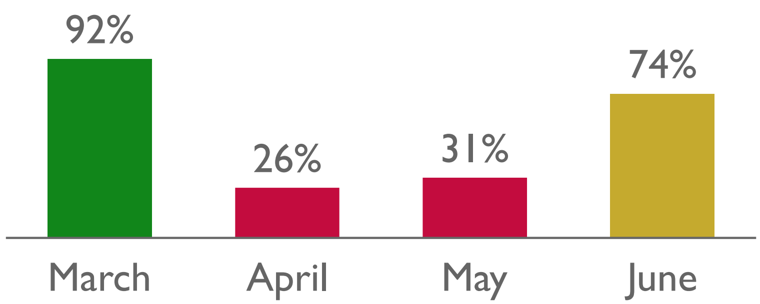


Mexico

Total sales vs PY



Brewing inputs sales vs PY



Note: Net sales index calculated as 2020 net sales as a percent of 2019 net sales

Ingredion

Q2: South America

Net Sales

- Down (19)%
  - Down (1)% excluding foreign currency impacts

Operating Income

(19)%

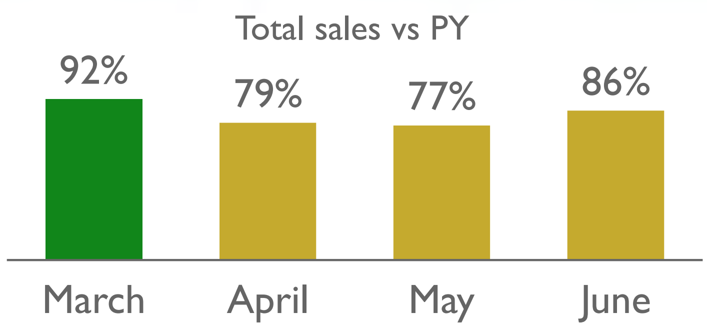
$13MM

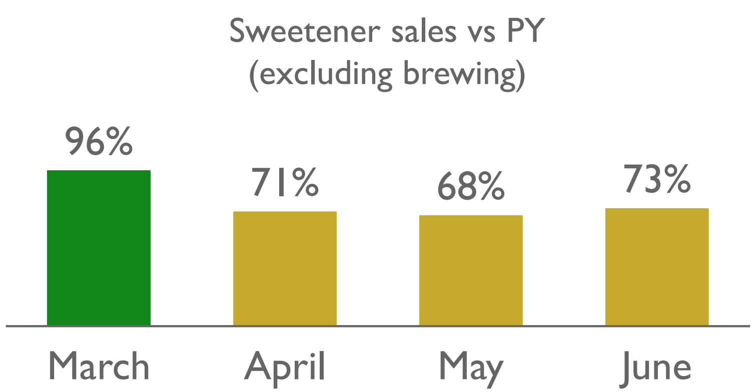
- Up 6% excluding foreign currency impacts

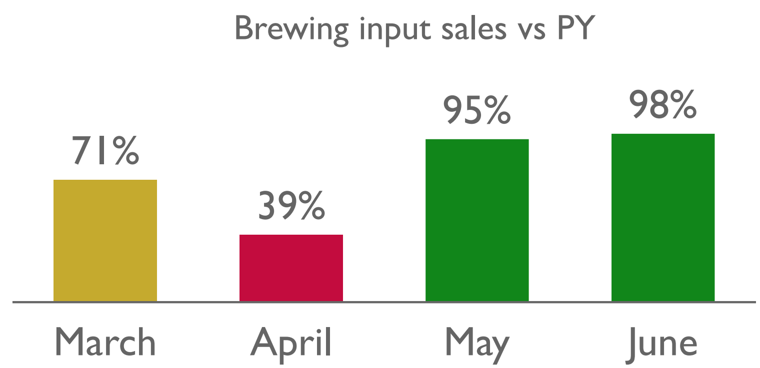
Performance Insights

- Weakening of GDP impacted currencies
- Stay-at-home orders impacted informal channels, across brewing, bakery and confectionary
- Excluding FX impacts, net sales down 11% driven by volume and offset by +10% price mix

Monthly Net Sales Trend: South America







Note: Net sales index calculated as 2020 net sales as a percent of 2019 net sales

Q2: Asia-Pacific

Net Sales

- Down (8)%
  - Down (5)% excluding foreign currency impacts

Operating Income

(4)%

$22MM

- Flat excluding foreign currency impacts

Performance Insights

- Volume softening experienced across region
- Tapioca performed well with solid margins

Ingredion

Q2: EMEA

Net Sales

- Down (8)%
  - Down (2)% excluding foreign currency impacts
  - Partially offset by favorable price mix

Operating Income

(9)%

$21MM

- Flat excluding foreign currency impacts

Performance Insights

- Pakistan experienced significant sales volume decline in April and May
- Strong specialty sales in Europe

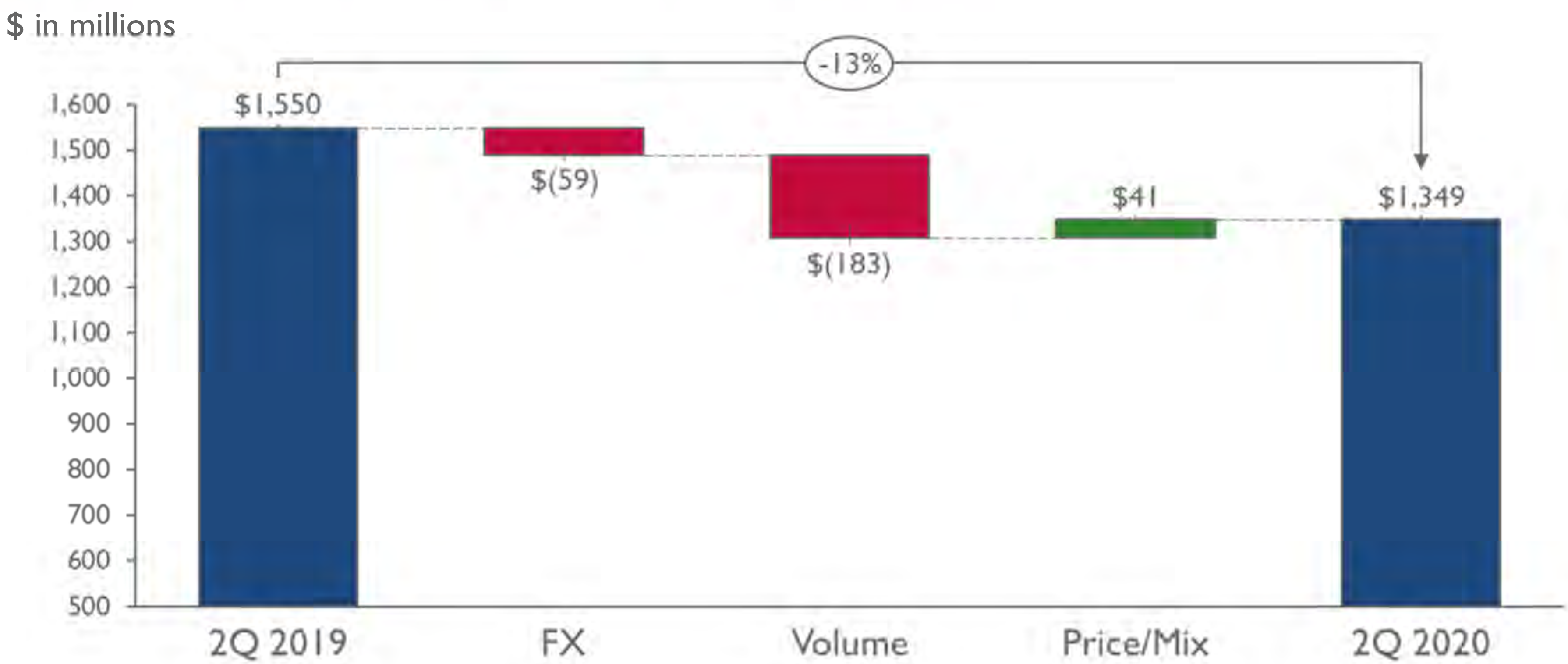
Q2 2020 Income Statement

$ in millions, unless noted	Q2 2019	Q2 2020	Change
Net Sales	$1,550	$1,349	($201)
Gross Profit	$329	$271	($58)
Gross Profit Margin	*21.2%*	*20.1%*	*(110 bps)*
Reported Operating Income	$168	$113	($55)
Reported Diluted EPS	$1.56/share	$0.98/share	$(0.58)/share
Adjusted Operating Income*	$178	$127	($51)
Adjusted Diluted EPS*	$1.66/share	$1.12/share	$(0.54)/share

Totals may not foot due to rounding
*See appendix for a reconciliation of these non-GAAP financial measures to U.S. GAAP measures.

Ingredion

Q2 2020 Net Sales Bridge



Totals may not foot due to rounding

Ingredion

Q2 2020 Net Sales Variance by Region

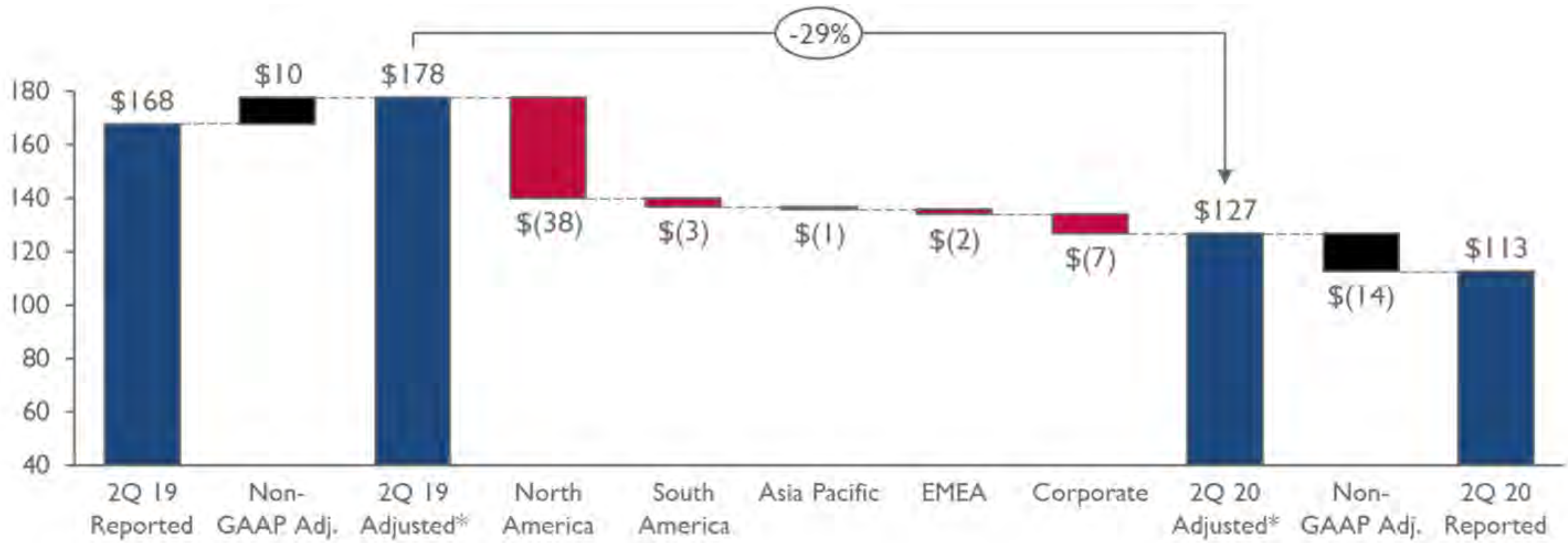
	Foreign Exchange	Volume	Price Mix	Net Sales Change
North America	0%	-15%	2%	**-13%**
South America	-18%	-11%	10%	**-19%**
Asia Pacific	-3%	-4%	-1%	**-8%**
EMEA	-6%	-5%	3%	**-8%**
Ingredion	-4%	-12%	3%	**-13%**

Totals may not foot due to rounding

Ingredion

Q2 2020 Operating Income Bridge

$ in millions



2020 Q2 OI	$101	$13	$22	$21	$(30)

Totals may not foot due to rounding
*See appendix for a reconciliation of these non-GAAP financial measures to U.S. GAAP measures.

Q2 2020 EPS Bridge

Amounts are dollars/share		
Q2 2019 Reported Diluted EPS	**$**	**1.56**
Impairment/Restructuring Costs		*0.10*
Q2 2019 Adjusted Diluted EPS	**$**	**1.66**
Q2 2020 Adjusted Diluted EPS	**$**	**1.12**
Acquisition/Integration Costs/Other		*(0.03)*
Impairment/Restructuring Costs		*(0.12)*
Q2 2020 Reported Diluted EPS	**$**	**0.98**

Margin	$	(0.09)
Volume		(0.35)
Foreign Exchange Rates		(0.08)
Other Income		(0.03)
Changes from Operations	$	(0.55)

Other Non-Operating Income	$	0.01
Financing Costs		(0.03)
Non-controlling Interests		-
Tax Rate		0.03
Shares Outstanding		-
Non-Operational Changes	$	0.01

Totals may not foot due to rounding
*See appendix for a reconciliation of these non-GAAP financial measures to U.S. GAAP measures.

Ingredion

YTD 2020 Highlights: Income Statement

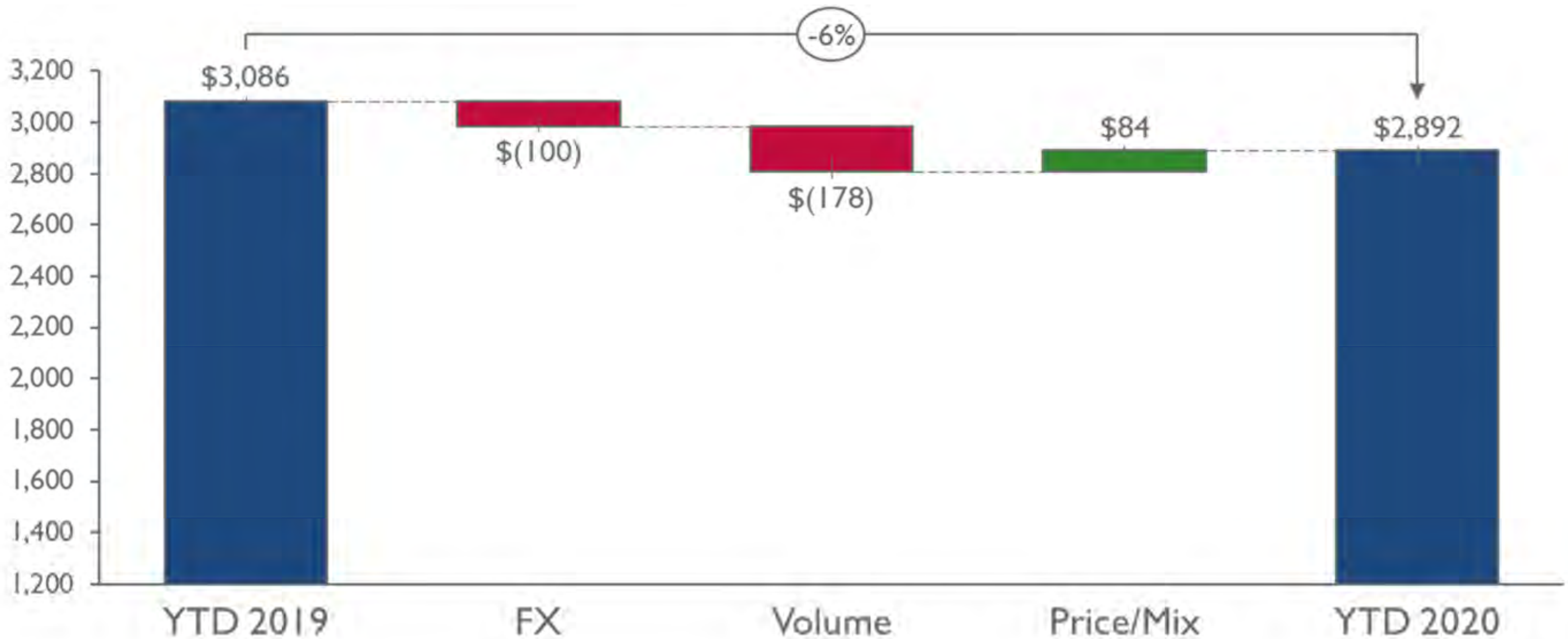
$ in millions, unless noted	2019	2020	Change
Net Sales	$3,086	$2,892	($194)
Gross Profit	$645	$594	($51)
Gross Profit Margin	*20.9%*	*20.5%*	*(40 bps)*
Reported Operating Income	$329	$266	($63)
Reported Diluted EPS	$3.04/share	$2.08/share	$(0.96)/share
Adjusted Operating Income*	$344	$294	($50)
Adjusted Diluted EPS*	$3.19/share	$2.72/share	$(0.47)/share

Totals may not foot due to rounding
*See appendix for a reconciliation of these non-GAAP financial measures to U.S. GAAP measures.

Ingredion

YTD 2020 Net Sales Bridge

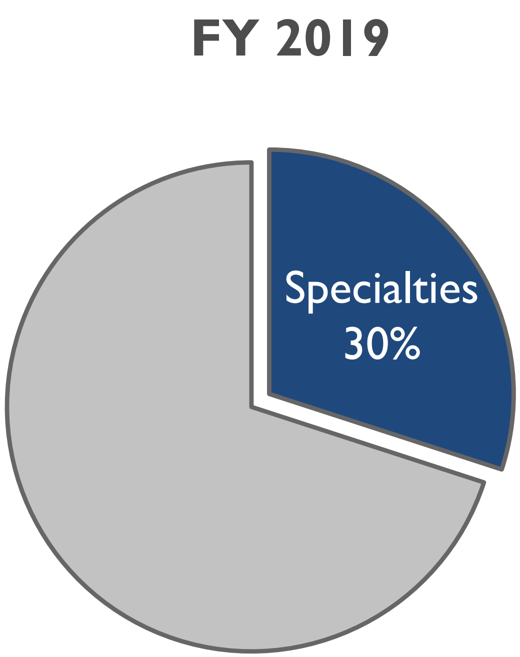
$ in millions

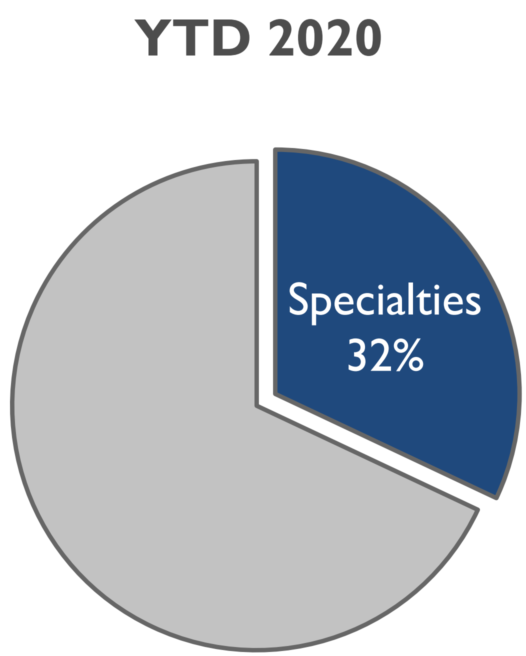


Totals may not foot due to rounding

Ingredion

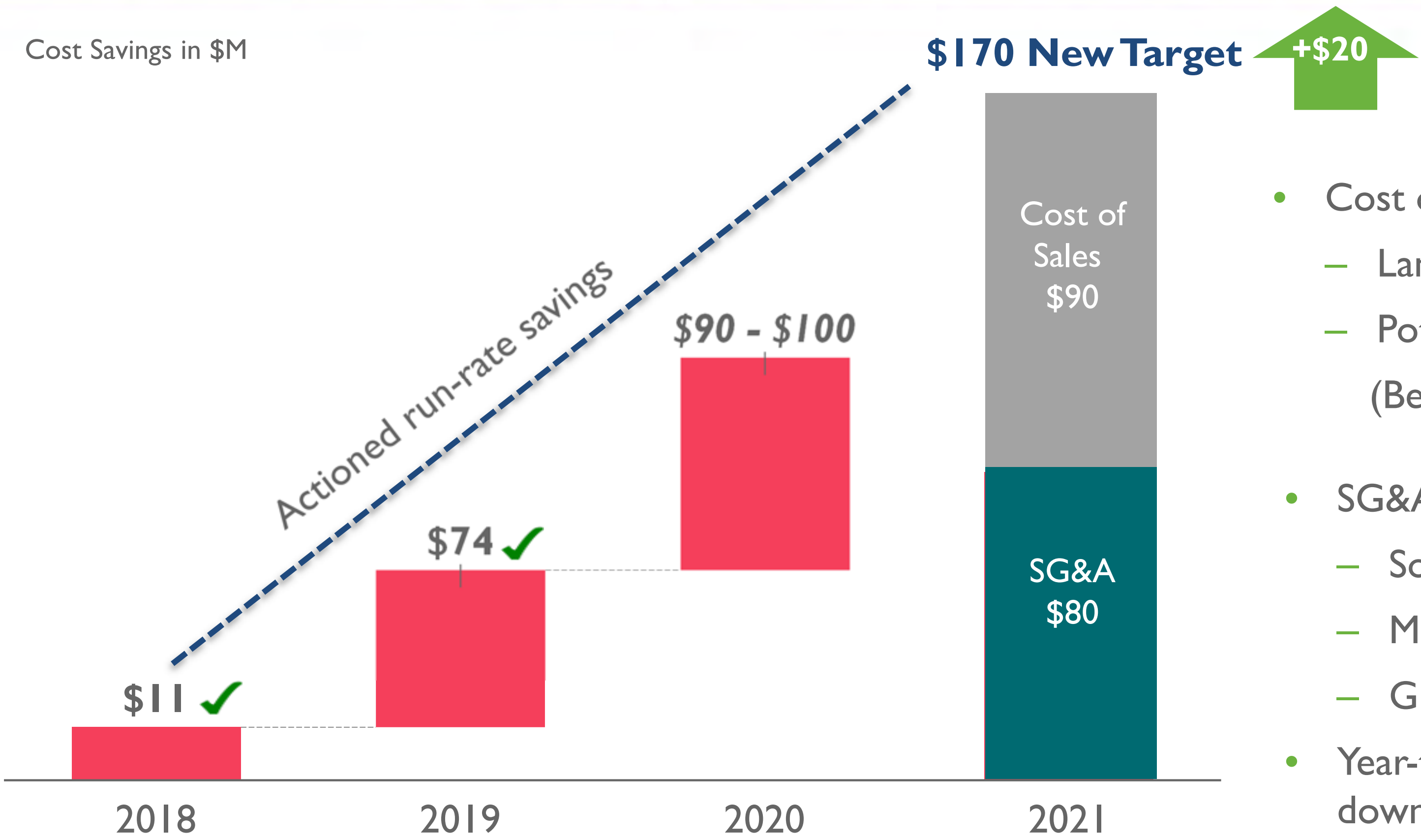
YTD Specialty ingredients within the product portfolio reach 32% of Net Sales





Ingredion

Cost Smart Target increased to $170M



- Cost of Sales
  - Lane Cove, Australia
  - Potato network consolidation (Berwick, PA & Grand Forks, ND)
- SG&A
  - South America restructuring
  - Mexico Shared Service Center
  - Global Business Services
- Year-to-date operating expenses down (1)% vs PY

Ingredion

YTD 2020 EPS Bridge

Amounts are dollars/share		
YTD 2019 Reported Diluted EPS	**$**	**3.04**
Impairment/Restructuring Costs		*0.01*
Acquisition/Integration Costs/Other		*0.15*
Discrete tax item		*(0.01)*
YTD 2019 Adjusted Diluted EPS	**$**	**3.19**
YTD 2020 Adjusted Diluted EPS	**$**	**2.72**
Acquisition/Integration Costs/Other		*(0.03)*
Impairment/Restructuring Costs		*(0.28)*
Discrete tax item		*(0.32)*
YTD 2020 Reported Diluted EPS	**$**	**2.08**

Margin	$	0.02
Volume		(0.38)
Foreign Exchange Rates		(0.13)
Other Income		(0.04)
Changes from Operations	$	(0.53)

Other Non-Operating Income	$	0.03
Financing Costs		0.01
Non-controlling Interests		-
Tax Rate		0.03
Shares Outstanding		(0.01)
Non-Operational Changes	$	0.06

Totals may not foot due to rounding
*See appendix for a reconciliation of these non-GAAP financial measures to U.S. GAAP measures.

Ingredion

Strong Year-to-Date Cash Position

$ millions		
Net Income	$	145
Depreciation and Amortization	$	106
Working Capital	$	12
Other	$	31
Cash Provided by Operations	**$**	**294**
Capital Expenditures	$	(175)
Payments for Acquisitions/Investments*	$	-
Dividend Payments**	$	(87)
Share Repurchase, net	$	-
Cash Deployment	**$**	**(262)**
Proceeds from Borrowings	$	777
Cash and cash equivalents, beginning of period	$	264
Other activities	$	(26)
Cash and cash equivalents, end of period	**$**	**1,047**

Totals may not foot due to rounding
* Net of cash acquired
** Including to non-controlling interest
Note: PureCircle acquisition of $222MM on July 1, 2020

Ingredion

Strong Balance Sheet Offers Financial Flexibility

	2018	2019	1H 2020 (TTM)
Investment Grade Rating - S&P - Moody's	BBB Baa1	BBB Baa1	BBB Baa1
Net Debt / Adjusted EBITDA*	1.8x	1.7x	1.8x

**See appendix for a reconciliation of these non-GAAP financial measures to U.S. GAAP measures*

Ingredion

Third Quarter Outlook

North America	• Significant sequential improvement versus Q2 though lower than prior year • Assuming U.S. consumer mobility is better than April / May nationwide lockdowns • Assuming easing of Mexico restrictions in the third quarter
South America	• Prevalence of the pandemic continues and timing of South America winter
EMEA	• Sequential improvement in EMEA as Europe demonstrates recovery • Assuming Pakistan does not experience severe stay-at-home restrictions
Asia-Pacific	• Barring second wave of heightened COVID cases • Anticipate Op Income down low single digits
Pure Circle	• Expect turnaround to take a year plus and anticipate operating losses in the near term
Corporate	• For the full year, capital expenditures expected to be $290 million to $310 million • Expect reported tax rate to be 29% to 32.7% and adjusted effective tax rate of 26% and 27% • Cost Smart cumulative run-rate savings target increased to $170 million by 2021

Ingredion

Roadmap for Value Creation

DRIVINGROWTH

Customer Co-Creation and Consumer

Specialty Growth Platforms

- STARCH-BASED TEXTURIZERS
- CLEAN AND SIMPLE INGREDIENTS
- PLANT-BASED PROTEINS
- SUGAR REDUCTION AND SPECIALTY SWEETENERS
- FOOD SYSTEMS

Core Food and Industrial Ingredients

Supply Chain and Operational Excellence

Sustainable and Trusted Sourcing

Purpose and Performance Driven Culture

VALUE CREATION

VALUE CREATION

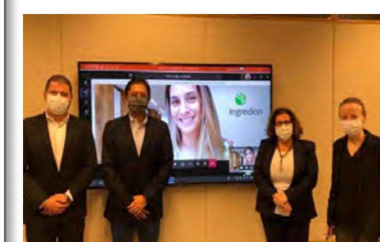
Expanding Sugar Reduction Capabilities

Strategic

- PureCircle acquisition expands our sugar reduction and specialty sweeteners platform
- Delivers a great tasting plant-based, zero-calorie alternative to sugar
- Addresses sugar reduction global megatrend in food and beverage
- Enables more complete sugar reduction systems
- Strong global customer portfolio and unique, differentiated innovation pipeline

Financial

- Trailing twelve months revenues as of June 30, 2020 were $101 million
- Anticipate negative operating margins for first year, while addressing product mix, pricing and cost synergies
- Targeting > 10% near term cost synergy
- Expect to achieve high-single digit revenue growth
- Integration underway; validation of synergy opportunities by end of 2020



Ingredion

Plant-based Proteins: Investments on Track

- South Sioux City, Neb., primary construction complete; entering commissioning and certification phase
- Plant-based proteins continue to experience massive growth and be in high demand

264% **alternative** meat grocery store sales **increased** over nine weeks during COVID.[1]

30% Consumers reported **eating more protein** from **plant sources** since the start of COVID.[2]

NORQUINA • Formed exclusive agreement to globally distribute and market high-value quinoa flours

1 Nielsen 2 International Food Information Council (IFIC) 2020 Food and Health Survey, June 2020

Investment in China Increases Growth Opportunities

- China is the largest and fastest growing starch market in the world
- Strong demand for specialty starches
- $85 million capital investment over the next two years
- More than doubles production capacity and expands capabilities
- Optimizes global supply chain, enables greater local sourcing and speed to market for China customers

Executing on Strategic Pillars to Drive Growth

Specialties

Build on our global innovation strengths aligning with current and future consumer trends and a changing customer landscape

Commercial Excellence

Accelerate and deliver value through customer co-creation and differentiated go-to-market capabilities

Cost Smart

Focus and simplify to better anticipate, execute and operate with agility to improve productivity and smartly lower our costs

Purpose-led Culture and Values

Unleash the potential of our people in an inclusive culture supported by contemporary values and an inspiring core purpose

Ingredion

Agenda

- Second quarter performance in a challenging environment
- Year-to-date performance
- DrivINGRowth Roadmap: Specialty Investments
- Questions and Answers

Ingredion

Appendix

To supplement the consolidated financial results prepared in accordance with Generally Accepted Accounting Principles ("GAAP"), the Company uses non-GAAP historical financial measures, which exclude certain GAAP items such as acquisition and integration costs, impairment and restructuring costs, and certain other special items. The Company generally uses the term "adjusted" when referring to these non-GAAP amounts.

Management uses non-GAAP financial measures internally for strategic decision making, forecasting future results and evaluating current performance. By disclosing non-GAAP financial measures, management intends to provide investors with a more meaningful, consistent comparison of the Company's operating results and trends for the periods presented. These non-GAAP financial measures are used in addition to and in conjunction with results presented in accordance with GAAP and reflect an additional way of viewing aspects of our operations that, when viewed with our GAAP results, provide a more complete understanding of factors and trends affecting our business. These non-GAAP measures should be considered as a supplement to, and not as a substitute for, or superior to, the corresponding measures calculated in accordance with generally accepted accounting principles.

Non-GAAP financial measures are not prepared in accordance with GAAP; therefore, the information is not necessarily comparable to similarly titled measures of other companies. A reconciliation of each non-GAAP historical financial measure to the most comparable GAAP measure is provided below.

Reconciliation of GAAP net income and diluted earnings per share (EPS) to non-GAAP adjusted net income and adjusted diluted EPS

	Three Months Ended June 30, 2020		Three Months Ended June 30, 2019		Six Months Ended June 30, 2020		Six Months Ended June 30, 2019	
	(in millions)	Diluted EPS	(in millions)	Diluted EPS	(in millions)	EPS	(in millions)	EPS
Net income attributable to Ingredion	$ 66	$ 0.98	$ 105	$ 1.56	$ 141	$ 2.08	$ 205	$ 3.04
Add back:								
Acquisition/integration costs, net of income tax benefit of $1 million for the three and six months ended June 30, 2020, and $1 million for the three and six months ended June 30, 2019 (i)	2	0.03	-	-	2	0.03	1	0.01
Restructuring/impairment charges, net of income tax benefit of $3 million and $6 million for the three and six months ended June 30, 2020, respectively, and $2 million and $3 million for the three and six months ended June 30, 2019, respectively (ii)	8	0.12	7	0.10	19	0.28	10	0.15
Discrete tax item - Mexico (iii)	-	-	-	-	22	0.32	(1)	(0.01)
Non-GAAP adjusted net income attributable to Ingredion	$ 76	$ 1.12	$ 112	$ 1.66	$ 184	$ 2.72	$ 215	$ 3.19

Net income, EPS and tax rates may not foot or recalculate due to rounding.

Notes

(i) The 2020 period primarily includes costs related to the acquisition and integration of the business acquired from PureCircle Limited. The 2019 period primarily includes costs related to the acquisition and integration of the business acquired from Western Polymer, LLC.

(ii) During the second quarter of 2020, the Company recorded $11 million of pre-tax restructuring/impairment charges, consisting of $6 million of restructuring related expenses primarily in APAC and North America as part of its Cost Smart cost of sales program and $5 million of employee-related and other costs, including professional services, associated with its Cost Smart SG&A program. During the six months ended June 30, 2020, the Company recorded $25 million of pre-tax restructuring/impairment charges, consisting of $15 million of restructuring related expenses primarily in APAC and North America as part of its Cost Smart cost of sales program and $10 million of employee-related and other costs, including professional services, associated with our Cost Smart SG&A program.

During the three and six months ended June 30, 2019, the Company recorded $9 million and $13 million of pre-tax restructuring charges, respectively. During the second quarter of 2019, the Company recorded $6 million of other costs, including professional services, and employee-related severance in the North America and South America segments as part of its Cost Smart SG&A program and finance transformation initiative and $3 million of other costs, including professional services, related to its Cost Smart cost of sales program. During the six months ended June 30, 2019, the $13 million of restructuring charges consisted of $9 million of costs associated with its Cost Smart SG&A program and Finance Transformation initiative and $4 million of costs associated with its Cost Smart cost of sales program.

(iii) The discrete tax item represents the impact of the Company's use of the U.S. dollar as the functional currency for its subsidiaries in Mexico. Mexico's effective tax rate is strongly influenced by the remeasurement of the Mexican peso financial statements into U.S. dollars. A $22 million discrete tax provision was recorded for the six months ended June 30, 2020 as a result of the movement of the Mexican peso against the U.S. dollar during the period, compared to a $1 million discrete tax benefit recorded for the six months ended June 30, 2019.

Reconciliation of GAAP operating income to non-GAAP adjusted operating income

(in millions, pre-tax)	Three Months Ended June 30, 2020	Three Months Ended June 30, 2019	Six Months Ended June 30, 2020	Six Months Ended June 30, 2019
Operating income	$ 113	$ 168	$ 266	$ 329
Add back:				
Acquisition/integration costs (i)	3	1	3	2
Restructuring/impairment charges (ii)	11	9	25	13
Non-GAAP adjusted operating income	$ 127	$ 178	$ 294	$ 344

For notes (i) through (ii) see notes (i) through (ii) included in the Reconciliation of GAAP Net Income attributable to Ingredion and Diluted EPS to Non-GAAP Adjusted Net Income attributable to Ingredion and Adjusted Diluted EPS.

Totals may not foot due to rounding

Ingredion

Reconciliation of GAAP effective income tax rate to non-GAAP adjusted effective income tax rate

(in millions)	Three Months Ended June 30, 2020 Income before Income Taxes (a)	Three Months Ended June 30, 2020 Provision for Income Taxes (b)	Three Months Ended June 30, 2020 Effective Income Tax Rate (b / a)	Six Months Ended June 30, 2020 Income before Income Taxes (a)	Six Months Ended June 30, 2020 Provision for Income Taxes (b)	Six Months Ended June 30, 2020 Effective Income Tax Rate (b / a)
As Reported	$ 94	$ 27	28.7%	$ 230	$ 85	37.0%
Add back:						
Acquisition/integration costs (i)	3	1		3	1	
Restructuring/impairment charges (ii)	11	3		25	6	
Discrete tax item - Mexico (iii)	-	-		-	(22)	
Adjusted Non-GAAP	$ 108	$ 31	28.7%	$ 258	$ 70	27.1%

(in millions)	Three Months Ended June 30, 2019 Income before Income Taxes (a)	Three Months Ended June 30, 2019 Provision for Income Taxes (b)	Three Months Ended June 30, 2019 Effective Income Tax Rate (b / a)	Six Months Ended June 30, 2019 Income before Income Taxes (a)	Six Months Ended June 30, 2019 Provision for Income Taxes (b)	Six Months Ended June 30, 2019 Effective Income Tax Rate (b / a)
As Reported	$ 152	$ 45	29.6%	$ 291	$ 82	28.2%
Add back:						
Acquisition/integration costs (i)	1	1		2	1	
Restructuring/impairment charges (ii)	9	2		13	3	
Discrete tax item - Mexico (iii)	-	-		-	1	
Adjusted Non-GAAP	$ 162	$ 48	29.6%	$ 306	$ 87	28.4%

For notes (i) through (iii) see notes (i) through (iii) included in the Reconciliation of GAAP Net Income attributable to Ingredion and Diluted EPS to Non-GAAP Adjusted Net Income attributable to Ingredion and Adjusted Diluted EPS.

Totals may not foot due to rounding

Ingredion

Net debt to adjusted EBITDA ratio

Net debt to adjusted earnings before interest, taxes, depreciation and amortization ("Net Debt to Adjusted EBITDA") ratio is not defined under U.S. generally accepted accounting principles and should be considered in addition to, and not as a substitute for the, Net Debt to Income before taxes ratio, or other GAAP financial measures. The Company defines this measure as total debt less cash and short term investments divided by EBITDA adjusted for items referred to below. The Company believes net debt to adjusted EBITDA is meaningful to investors as it focuses on our leverage on a comparable EBITDA basis, and helps investors understand the time it would take to pay back the Company's outstanding debt. The most comparable ratio calculated using components determined in accordance with GAAP is Total net debt to Income before income taxes, calculated as Short-term and Long-term debt less Cash and cash equivalents and Short-term investments, divided by Income before income taxes. The calculations for the ratio of net debt to Income before income taxes and the ratio of Total net debt to Adjusted EBITDA are provided in the table below.

Net Debt to Adjusted EBITDA ratio	**2018**	**2019**	**12 months trailing June 30, 2020**
Short-term debt	$ 169	$ 82	$ 470
Long-term debt	1,931	1,766	2,140
Less: Cash and cash equivalents	(327)	(264)	(1,047)
Short-term investments	(7)	(4)	(1)
Total net debt (a)	1,766	1,580	1,562
Income before income taxes (b)	621	582	521
Adjusted for:			
Depreciation and Amortization	247	220	223
Financing cost, net	86	81	80
Restructuring/impairment (i)	30	44	56
Acquisition/integration costs	-	3	4
Other matters (ii)	-	(19)	(19)
Adjusted EBITDA (c)	984	911	865
Net Debt to Income before income tax ratio (a ÷ b)	2.8	2.7	3.0
Net Debt to Adjusted EBITDA ratio (a ÷ c)	1.8	1.7	1.8

(i) 2019 Restructuring/impairment charges are reduced by $13 million to exclude the accelerated depreciation primarily related to the Lane Cove, Australia production facility closure. 2018 Restructuring/impairment charges are reduced above by $34 million to exclude the accelerated depreciation from cessation of wet-milling at the Stockton, California plant. The accelerated depreciation is included within Depreciation and Amortization above, and excluded in restructuring / impairment charge. See Note 5 of Q2 2020 Form 10-Q for the reconciliation to the $57 million and $64 million restructuring charges recorded in 2018 and 2019, respectively.

(ii) During the three months ended December 31, 2019, we recorded a $22 million pre-tax benefit for the favorable judgement received by Ingredion from the Federal Court of Appeals in Brazil related to certain indirect taxes collected in prior years. As a result of the decision, the Company expects to be entitled to credits against its Brazilian federal tax payments in 2020 and future years. The benefit recorded represents the Company's current estimate of the credits and interest due from the favorable decision in accordance with ASC 450, Contingencies. This benefit was offset by other adjusted charges during the period.

Ingredion

Reconciliation of Anticipated Reported GAAP Effective Income Tax Rate to Anticipated Non-GAAP Adjusted Effective Tax Rate

	Anticipated Effective Tax Rate Range for Full Year 2020	
	Low End	High End
GAAP ETR	29.0%	32.7%
Add:		
Acquisition/integration costs (i)	0.1%	0.1%
Restructuring/impairment charges (ii)	1.1%	1.1%
Discrete tax item - Mexico (iii)	-3.0%	-5.6%
Other tax matters (iv)	0.5%	0.5%
Impact of adjustment on Effective Tax Rate (v)	-1.7%	-1.8%
Adjusted ETR	26.0%	27.0%

Above is a reconciliation of our anticipated full year 2020 GAAP ETR to our anticipated full year 2020 adjusted ETR, excluding the impact of the July 1, 2020 acquisition of PureCircle Limited. The amounts above may not reflect certain future charges, costs and/or gains that are inherently difficult to predict and estimate due to their unknown timing, effect and/or significance. These amounts include, but are not limited to, acquisition and integration costs, impairment and restructuring costs, and certain other special items. We generally exclude these items from our adjusted ETR guidance. For these reasons, we are more confident in our ability to predict adjusted ETR than we are in our ability to predict GAAP ETR.

(i) Reflects costs related to the acquisition and integration of business acquired from PureCircle Limited.

(ii) Reflects current estimates for 2020 restructuring charges related to the Cost Smart Cost of Sales & SG&A programs. As specific projects within these programs are approved, the estimates will be reviewed and may be subject to revision.

(iii) Estimated impact of the change in the value of the Mexican peso against the U.S. dollar. Because the Company uses the U.S. dollar as the functional currency for its subsidiaries in Mexico, its effective tax rate is strongly influenced by the remeasurement of the Mexican peso financial statements into U.S. dollars. The change in the Mexican peso produced substantial taxable translation gains or losses on net-U.S.-dollar-monetary assets held in Mexico for which there are no corresponding gain in pre-tax income.

(iv) This relates to other tax settlements and the reversal of interest and penalties for tax reserves.

(v) Indirect impact of tax rate after items (i) through (iv).

Ingredion