

**20
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CRA
INDUSTRY
OVERVIEW



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Ingredion Incorporated

Jim Stutelberg
CRA Vice Chairman
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Sustainability

WELCOME LETTER

What a year it has been.

The arrival of COVID-19 served as a stark reminder that some events are simply beyond our control. Yet these turbulent times also highlighted the importance of the family, friends, and professionals in our lives who offer support and guidance when it is needed most.

During the early, uncertain days of COVID, CRA worked with the larger food and beverage industry to develop, support, and share guidance concerning the pandemic, acting as an essential conduit between CRA member companies and the government officials and experts working to keep us safe.

Following the social and racial unrest our nation experienced over the summer, the CRA team took stock of its organizational values and examined our impact on the community around us. We then adopted a formal statement that lays out our values. CRA's subsequent annual overviews will report on how we continue to give action to our values.

These efforts and many more from the last year are detailed in the following 40 pages.

Since our last report, we have seen the ratification of the USMCA trade agreement and monitored its implementation. Meanwhile, additional trade agreements and Trade Promotion Authority are on tap for 2021.

In other international news, the CRA team continued to engage on matters of policy with Mexico, one of our largest trading partners for refined corn products. We are working to craft solutions to a broad range of issues including trade barriers, non-trade barriers, labeling, and product reputation.

Our industry also made exceptional progress on biogenic CO2 issues, leading and growing a diverse coalition that is delivering a full-spectrum, non-partisan advocacy effort across earned media, social media, grassroots, grasstops, and policymaker engagement. The appropriate biogenic CO2 regulatory changes can become an economic engine for rural states, and we believe we have laid the foundation for bipartisan success in 2021.

CRA also released its own climate principles and stood tall in support of the Growing Climate Solutions Act, which is designed to ensure the agricultural sector is well-placed to assist in the battle against climate change.

The Plant Based Products Council (PBPC) was launched by CRA members just two years ago. With the support of staff shared by CRA and PBPC, it has grown and matured, engaging on critical issues and promoting the use of plant-based feedstocks to advance the bioeconomy and address the challenges of climate change, municipal waste, water quality, and soil health.

Perhaps most impressively, these achievements were earned while CRA's committees and staff adjusted to the new COVID environment, continuing this important work from home while also addressing the personal and professional challenges created by the pandemic.

Thank you to every one of you who went the extra mile during this difficult time to ensure our industry's ongoing success.



Rob Ritchie
CRA Chairman



Rob Ritchie
Chairman



Jim Stutelberg
Vice Chairman



John Bode
President & CEO

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In response to COVID-19 staff:



Created an
Online Resource
Center



Developed **5**
Blog Posts



Sent **86**
email updates to
CRA Members

Participated in **106**
conference calls with industry
partners and 9 different
government agencies



FEMA



THE COVID-19 CRISIS

As COVID-19 emerged and spread, the world was forced to study the virus and its prevention in real time.

To assist our members, the CRA team, led by Allison Cooke, joined scores of conference calls with key U.S. government agencies and participated in calls with industry partners to stay apprised of issues and challenges facing the food and agriculture sector. CRA served as a primary conduit to our industry, sharing the content of these calls with key CRA committees and compiling resources for members in regular email summaries. CRA also led coordination with 18 food and agriculture industry associations – supporting the assembly of relevant federal and state COVID-19 policies and guidance for the sector, covering food manufacturing, distribution, and retail establishments.

Near the beginning of the pandemic, the Department of Homeland Security offered advisory guidance for critical infrastructure sectors and essential workers to assist with continued operations. However, soon after, many states issued their own directives concerning essential workers and “stay at home” orders. In coordination with other industry actors, CRA led outreach to Iowa, Nebraska, and North Dakota, working to encourage better state and federal alignment to help continue operations while protecting essential workers.

CRA staff continues to respond to member questions and interests regarding the virus and provide updates to relevant CRA committees on industry activities, government activities, announcements, and stakeholder calls.

CRA also maintains the [COVID-19 Resource Center](#) and produced a “thank you” [video](#) for food and agricultural industry workers, both available at corn.org.

CRA VALUES STATEMENT

For over 100 years, CRA has endeavored to represent the corn wet milling industry and support the larger food and agriculture sector in Washington, D.C. and beyond. CRA's efforts drive policy and shape regulation to ensure our entire corn-based value chain — from farmer to consumer — is strong, resilient, healthy, and safe.

At CRA, we live our values, defined by –

C

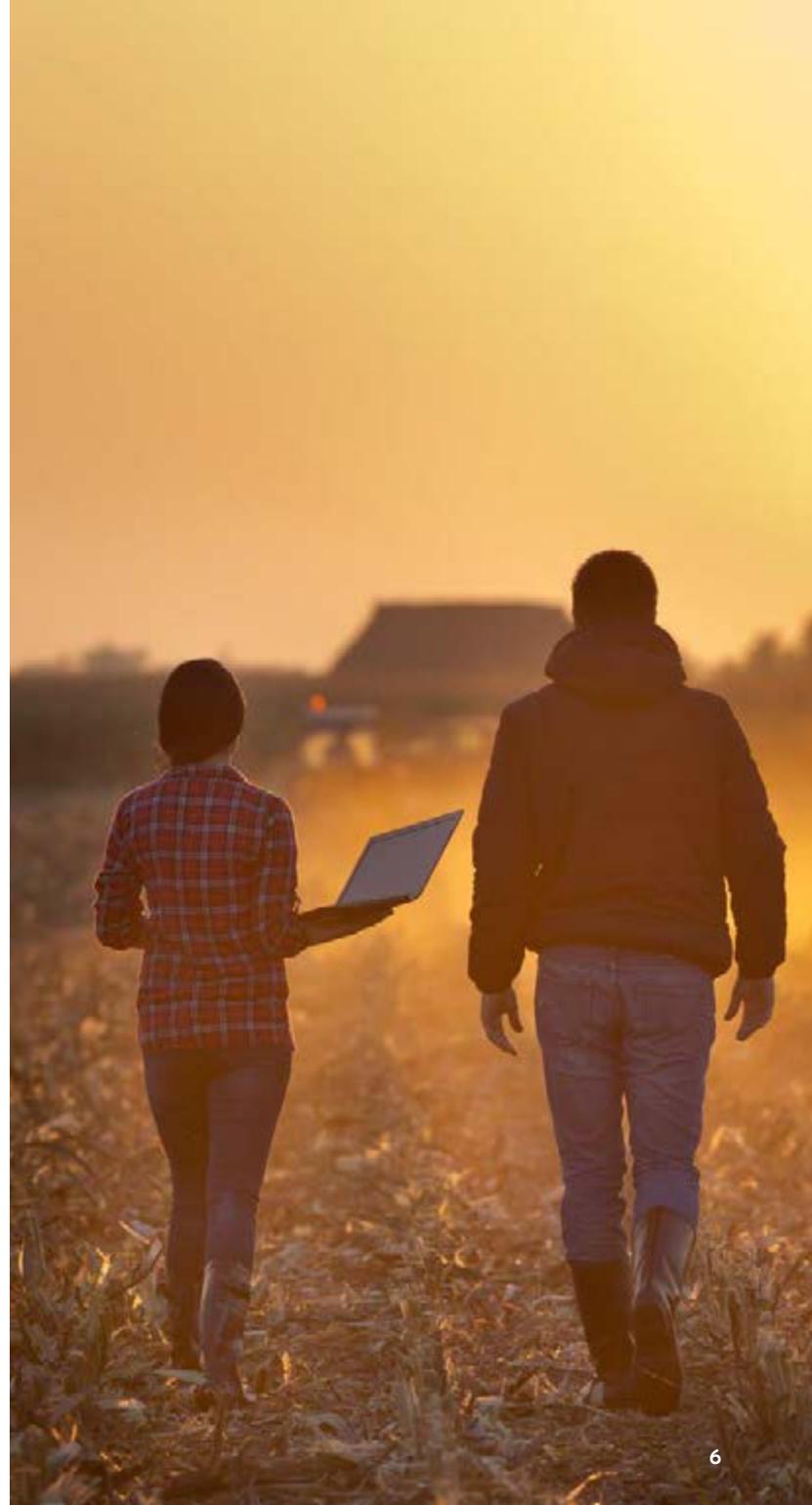
Community – We work to advance the people with whom, and environment in which, our members, industry, and staff work and live, defined by our commitment to those who share common values.

R

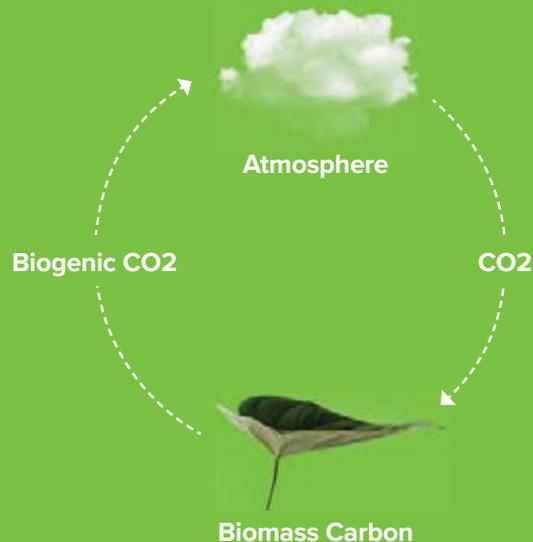
Respect – We listen and learn from all others to promote integrity in our approach, honesty in our communication, and fairness in our actions. Thereby, we strive to reduce our environmental impact and strengthen diversity and inclusion of people, thoughts, and experiences.

A

Action – CRA is action oriented in furthering our values through our mission, with a staff that is empowered to speak and act on informed, collaborative, and thoughtful decisions.

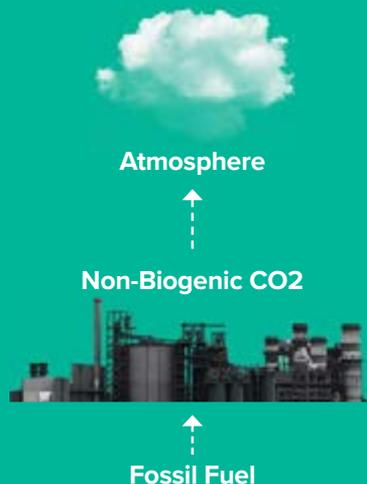


THE BIOMASS CARBON CYCLE



VS

CARBON TRANSFERS FROM GEOLOGICAL RESERVES



BIOGENIC CO2 POLICIES LIMIT RURAL GROWTH

We all learned about photosynthesis in grade school: how agricultural crops capture carbon dioxide from the atmosphere as part of a natural cycle. After the crops are harvested at season's end, they are processed and that same carbon dioxide is released back into the atmosphere.

Unfortunately, the Environmental Protection Agency (EPA) does not distinguish these biogenic CO2 emissions from those associated with fossil fuels like oil and gas. That means CO2 that is part of a baseline natural process is treated exactly the same as CO2 captured millions of years ago and released when fossil fuels are extracted and burned.

A consensus of the scientific community agrees this policy makes no sense.

As the leader of the Biogenic CO2 Coalition, CRA is urging the EPA to change its policy on biogenic CO2. In 2020, we accelerated our full-spectrum, non-partisan advocacy campaign across earned media, social media, grassroots, grasstops, and policymaker engagement.

Our bipartisan efforts will continue in 2021 with a goal of getting a final rulemaking on this issue from EPA as soon as possible. To date the campaign has included (see next page):

BIOGENIC CO2 CAMPAIGN MILESTONES



“This legislation is designed to serve the farmers who produce agricultural commodities like corn, an acknowledgement from leading policymakers that American agriculture is a crucial player in the fight against climate change.”

– Justin Maroccia

CRA UNVEILS CLIMATE PRINCIPLES & JOINS POLICY EFFORTS

In March 2020, the CRA Board of Directors approved CRA's Climate Change Principles, five statements designed to guide our advocacy on related policy matters (see next page).

As a direct result of these principles and our industry's consistent commitment to sustainability in environmental policy, CRA formally endorsed the Growing Climate Solutions Act in June. The bill was introduced initially in the Senate by Debbie Stabenow of Michigan and Mike Braun of Indiana. This bill, and its bipartisan House companion, would set up a certification program at the USDA to identify trusted outside experts for farmers to work with in navigating the carbon credit process so they can participate in voluntary carbon markets.

This bill is an excellent first step toward federal recognition that agriculture is part of the solution to climate change, and it is designed so that farmers are able to benefit financially from their carbon sequestration efforts. CRA is committed to serving member companies as they strive for sustainability in all aspects of their operations, balancing economic viability, environmental impact, and societal benefits.

CRA'S CLIMATE CHANGE PRINCIPLES

- 1** ---  **REDUCE THE OVERALL CARBON FOOTPRINT OF CORN REFINING PRODUCTS AND PROCESSES.**
- 2** ---  **GREENHOUSE GAS REDUCTION GOALS MUST BE CLEAR, MEASURABLE, AND ACHIEVABLE OVER TIME.**
- 3** ---  **SUPPORTING THE ADOPTION OF AGRICULTURAL PRACTICES THAT SEQUESTER CARBON INTO SOIL.**
- 4** ---  **SUPPORT POLICIES THAT HELP ENERGY-INTENSIVE INDUSTRIES ADAPT TO POTENTIAL FEDERAL OR STATE CARBON REDUCTION POLICIES.**
- 5** ---  **AGRICULTURAL FEEDSTOCKS IN INDUSTRIAL PROCESSES ARE KEY TO ADVANCING GREENHOUSE GAS REDUCTIONS.**



PLANT BASED PRODUCTS COUNCIL

In January of 2021, PBPC celebrated its second anniversary, offering a chance to reflect on an impressive year of growth and increasing influence as it matures into a self-sufficient policy organization. During its second full year, the organization nearly doubled in size, growing to more than 100 members. PBPC also unveiled its dues and membership tiers structure, ensuring that it will evolve into a financially self-sufficient organization of core members dedicated to its sustainability mission.

Even in the face of COVID, PBPC sought new ways to interact with the public, growing its social media presence, expanding the reach of its newsletter, and speaking on numerous influential webinars, including through partnerships with the Environmental Law Institute and the Oceans Caucus Foundation.

On the policy front, PBPC adopted an ambitious advocacy agenda focused on promoting policy objectives that support industry growth. PBPC is engaging regulators directly, having submitted comments on the new Agriculture Innovation Agenda from USDA and on the North American Industry Classification System (NAICS). These codes classify businesses for data purposes related to the U.S. economy. PBPC is even engaging Canadian and European policymakers on plastics and packaging regulations.

Finally, PBPC launched an impressive polling and research operation. The program is expected to collect new data annually.

PBPC created its first multi-year, strategic plan – a blueprint for growth and influence with clear goals and measurable performance benchmarks.

PBPC RESEARCH & HIGHLIGHTS

The PBPC survey found:

59%

of consumers are interested in plant-based products.



54%

look favorably on plant-based products and packaging.



A majority

of consumers say they are likely to purchase plant-based products and packaging.



56%

of consumers are likely to support a company that produces or uses products and packaging made from plants.



Nearly half

of consumers are likely to recommend products and packaging made from plants.



Perhaps most importantly, this research is expected to serve as a foundation and baseline for future years, ensuring PBPC is able to both reveal new trends and track old ones in order to inform members and the public about changing attitudes over time.



RELATIONS WITH MEXICO

Recent years have continued to make clear the critical importance of Mexico to our industry. Mexico is the largest market for refined corn products, accounting for over 30% of U.S. exports, valued at over \$600 million. Further, CRA members have vital direct and indirect investments there.

Yet, our industry and its ingredients have been targeted by Mexican policymakers – named among the first to potentially suffer in retaliatory trade measures, and a focus of potential non-trade barriers related to labeling, ingredient reputation, and other matters.

CRA believes the quality of the bilateral relationship between the U.S. and Mexico will continue to shape the effective implementation of the USMCA trade agreement and our broader industry. With those stakes in mind, CRA is taking a multi-pronged approach.

First, CRA is seeking to strengthen U.S.-Mexico policymaker ties through the U.S. Congress and is simultaneously exploring how

to help build new institutions in Washington, or support existing ones, that will focus on trade and commercial relations with Mexico.

Second, CRA is working with industry allies to shape the policymaking process in Mexico, for example, supporting regulatory filings that seek to ensure fair and science-based treatment of our products and ingredients.

Third, CRA has engaged U.S. policymakers and multilateral institutions to address the creation of possible non-trade barriers by Mexican officials.

Further, CRA and our colleagues in Mexico are closely monitoring for any disparaging statements about our industry or products by Mexican government officials. CRA is continually concerned regarding the reputation of our products both domestically and around the globe. CRA strives to respond effectively to concerning statements and works to provide factual information about our ingredients in food and beverage products.

FEEDING THE ECONOMY

Three years ago, CRA created a first-of-its-kind economic study that examined the food and agriculture industries across their value chains, calculating their combined economic contributions to our nation. CRA also created the website feedingtheeconomy.com to showcase that information and, more recently, has made it available at the Congressional District and state level.

This vital resource provides policymakers reliable and impressive economic data that is not available anywhere else in the world. By highlighting how our industries and employees impact their home states and districts, we are able to capture the attention and imagination of these policymakers.

Updated each year since its creation, our study and website has been an essential foundation to multiple, successful advocacy campaigns run by CRA and its allies, especially in matters related to trade and infrastructure.

UNITED STATES ECONOMIC IMPACT



JOBS
46,856,444



WAGES
\$2.27 T



TAXES
\$885.30 B



EXPORTS
\$148.41 B



OUTPUT
\$7.64 T

STAKEHOLDER MAPPING

As part of our strategic plan, CRA staff is mapping our engagement with key stakeholder coalitions across the industry's most important issues.

Staff is identifying those coalitions in which CRA is involved, currently numbering 36 across different policy areas, including food and nutrition policy, trade, transportation, environmental affairs, and sustainability. CRA staff lead several of these coalitions, primarily in the areas of food and nutrition policy and environmental issues.

In addition to identifying those coalitions in which CRA is engaged, staff has begun cataloguing other organizations where CRA has strong relationships, including trade associations, CRA customers, and non-governmental organizations (NGOs). Our preliminary assessment has found connections with over 150 different associations, organizations, and NGOs across all our policy areas.

Staff plans to continue this exercise and regularly update our contacts and coalition lists, as needed. This activity has also been initiated for the Plant Based Products Council (PBPC).



FOOD AND NUTRITION COALITIONS

Food and nutrition policy is a key area where coalition-led efforts are essential to ensuring that local, federal, and global policymakers base their regulations and policy recommendations on robust scientific evidence, delivering measurable benefits to consumers. CRA strongly supports policies that empower consumers to make informed and healthy purchasing decisions while preventing misunderstanding and confusion. And, we believe that food and nutrition policies should provide real-world guidance, reflecting the needs and interests of the majority of Americans. These strategic goals guide our efforts across the full spectrum of food and nutrition policy, including labeling, ingredients, reputation, and dietary guidelines.

CRA is a member of a number of food and nutrition coalitions that address priority food and agriculture issues, including those related to labeling, food safety, and product reputation. CRA leads food and nutrition coalitions related to Dietary Guidelines, bioengineered food disclosure, and issues related to FDA's Nutrition Innovation Strategy. CRA is involved in coalitions led by the some of the following:



TRADE POLICY

Global trade is essential to American agricultural success broadly, and to refined corned products specifically. To ensure free and open markets for our products around the world, CRA is an active leader in numerous trade policy issues impacting the food and agriculture sector.

In the last year we have monitored implementation of the USCMA, signed into law by President Trump in January; supported the launch of new trade negotiations; and fought the creation of non-trade barriers that could impact some of our largest markets. Meanwhile, CRA organized a letter to USTR Ambassador Robert Lighthizer and bipartisan Congressional leadership to express strong support for U.S. engagement in the WTO, including the dispute settlement system. It was signed by over 60 agriculture organizations with representation across the agriculture spectrum.

And, as a cleared technical advisor, CRA actively engages, monitors, and advises USTR and USDA negotiators on confidential trade offers and texts concerning the ongoing U.S.-U.K. trade negotiations, which are expected to be a 2021 priority.

Finally, Trade Promotion Authority expires July 1, 2021. CRA will advocate with Congress to ensure new authority is granted to the Executive Branch to smooth future trade negotiations and their approval.

ISSUES

- USMCA Implementation
- Trade Promotion Authority
- WTO Reform
- Improving Market Access for Products of Modern Biotechnology
- Supporting New Trade Agreements



Michael Anderson

*Vice President,
Trade & Industry Affairs*



FOOD POLICY

Refined corn products have been part of the American diet for well over a century and represent one important option for providing the nutritional fiber, protein and carbohydrates required in a healthy diet. To promote consumers' healthy purchasing decisions, CRA strongly supports food and nutrition policies which are backed by sound scientific evidence. Refined corn products are also considered to be some of the safest human food ingredient products available today, with a long history of safe use.

That's why CRA is consistently active on nutrition policy and biotech issues, serving as a leading voice for the food and ingredient industry. For example, when USDA's Agricultural Marketing Service published final guidance on validation testing methods for their bioengineered food disclosure rule, USDA incorporated feedback driven by CRA — ensuring appropriate validation testing for refined ingredients. Our work also extends to international markets and standard-setting bodies considering regulatory and other policy changes related to food and agriculture matters. In such cases, we engage with industry partners and experts and participate in outreach to U.S. officials, as necessary.

Two key committees drive CRA policies regarding consumer health and safety: the Health & Wellness and Product Safety & Quality committees. The Health & Wellness Committee provides recommendations to the Board regarding the public health role of refined corn products, including research that supports the

nutrition education mission of CRA. The Product Safety & Quality Committee is responsible for providing recommendations to the Board regarding a range of product safety and quality matters generally regulated by the U.S. Food and Drug Administration (FDA).

ISSUES

- Biotech (GMO) Labeling Law and USDA Rulemaking
- Dietary Guidelines for Americans
- U.S. FDA Nutrition Innovation Strategy
- International Labeling Initiatives
- International Organization Activities (e.g., Codex Alimentarius, JECFA)
- Mycotoxin Reviews
- Product Testing



Allison Cooke

Director, Food Policy



ENVIRONMENTAL POLICY & WORKPLACE SAFETY

Among CRA's environmental initiatives, our highest profile policy matter is our effort to ensure the EPA appropriately classifies biogenic CO2 emissions as de minimis, as detailed earlier in these pages. CRA monitors the rapidly evolving policy picture on climate change for other opportunities to highlight how the food and agricultural sectors can participate in solutions.

CRA has also worked closely with the U.S. Chemical Safety and Hazard Investigation Board (CSB) on the dangers of combustible dust. Their recent report specifically emphasizes the success of our industry's voluntary efforts on this matter, further underscoring the remarkably low injury rates from all causes across our industry.

As a member of the Coarse Crustal Coalition, CRA has long advocated for EPA to distinguish between roadside urban dust, known to have health impacts at ambient levels, and coarse crustal dust, dangerous only during windstorms or other aberrant events. In addition, CRA joined the NAAQS Regulatory Review and Rulemaking (NR3) Coalition, a broad group of stakeholders with interests in the ongoing NAAQS review process.

CRA's Environmental Affairs Committee is responsible for providing the Board recommendations regarding environmental matters, particularly matters generally

regulated by the EPA, including air quality, water quality, and pollution mitigation. CRA's Workplace Safety Committee is responsible for providing the Board recommendations and promoting workplace matters generally regulated by the Occupational Safety and Health Administration.

ISSUES

- Biogenic CO2 Emissions
- NSR/PSD Reform
- Navigable Waters Protection Rule
- National Ambient Air Quality Standards (NAAQS)
- Process Safety Management of Highly Hazardous Chemicals
- Renewable Fuels Standards 2 (concerning corn oil as feedstock)
- 45Q Tax Credits



Eamon Monahan

*Director, Environmental Affairs
& Workplace Safety*



ADVANCED BIOPRODUCTS

Petroleum-based plastic products are the leading environmental concern for many Americans, according to one recent survey. Our industry is now playing a formative role in addressing these concerns, highlighting how renewable, sustainable corn products (and other feedstocks) can serve as a substitute to fossil fuels.

CRA launched the Plant Based Products Council (PBPC) to help educate stakeholders about the benefits of our agricultural feedstocks as environmentally-friendly ingredients in everything from chemicals to car parts. PBPC is driving policies that support the broader adoption of plant-based products, along with their proper disposal. PBPC is also serving as a leader in the formation of the U.S. Composting Infrastructure Coalition, an organization working to promote the build-out of additional infrastructure to handle these products' end-of-life and ensure these resources become part of the circular economy.

The Advanced Bioproducts Committee is responsible for providing the Board recommendations regarding policies that may facilitate development of a dynamic bioproducts market for the corn refining industry. The Committee also works with USDA agency staff, as well as allies in Congress, to help raise awareness of barriers to a vigorous bioeconomy.

ISSUES

- Advanced Bioproducts
- The Plant Based Products Council (PBPC)
- Municipal Waste/ Product End of Life
- U.S. Composting Infrastructure Coalition



Jessica Bowman

*Vice President,
Advanced Bioproducts*



TRANSPORTATION POLICY

Our nation's transportation networks are growing older and less reliable while supporting increased traffic. These concerns persist across our networks of roadways and railways and from our airports to our seaports. America's bridges and inland waterways, too, require systemic investment to ensure their safety.

With these concerns in mind, CRA continues to work with more than 200 other rural and agricultural groups on critical infrastructure issues. And while a sweeping federal infrastructure bill proved politically elusive in 2020, CRA worked to advance other infrastructure efforts: working with the Surface Transportation Board on rail policy and supporting efforts to pass the biennial Water Resources Development Acts (WRDA), for inland waterways.

CRA's Transportation Committee provides advice and guidance on legislative and regulatory policy issues related to transportation and infrastructure, and currently is focusing on advancing CRA member priorities for a future infrastructure package. CRA acts as an informal steering committee member for the Agriculture Transportation Working Group and is active the Agriculture Transportation Coalition, the Rebuild Rural Coalition, and Rail Customer Coalition, all of which focus on infrastructure initiatives.

ISSUES

- Infrastructure Funding
- Rail Competition Issues
- Waterways Funding
- Highway Trust Fund
- Surface Transportation Board Issues



Michael Anderson

*Vice President,
Trade & Industry Affairs*



SUSTAINABILITY POLICY

CRA member companies strive for sustainability in all aspects of their operations -- balancing economic viability, environmental impact, and societal benefits. To reflect those values, CRA engages in a broad range of industry and environmental coalitions focused on sustainability across the corn and agriculture value chain.

This year, CRA developed and released Climate Change Principles – five guideposts designed to drive industry advocacy on these matters. Soon after the Board’s approval of these principles, CRA endorsed the Growing Climate Solutions Act. The legislation is one important step to help ensure that the agricultural value chain can play a role in fighting climate change through encouraging widespread agricultural carbon sequestration.

Meanwhile, CRA continues its involvement with Field to Market and the Keystone Monarch Collaborative. Field to Market is an alliance of organizations dedicated to sustainable agriculture, advancing continuous, science-based environmental improvements across the U.S. agricultural value chain. The Keystone Monarch Collaborative is helping restore and protect monarch butterflies, among other pollinators, whose populations have been dwindling for the last two decades.

CRA’s Sustainability Committee offers guidance to CRA’s Board concerning a broad range of sustainability issues and initiatives, whether related to government policy at the state or federal level or driven by partners

and stakeholders from the business community or not-for-profit organizations. Working with these and other appropriate partners, CRA stands with its member companies to solve some of the most complex challenges of the 21st century.

ISSUES

- Corn Wet Milling Life Cycle Assessment
- Carbon Policy
- Keystone Monarch Collaborative
- Field to Market
- Industry Image Enhancement



Justin Maroccia
Manager, Sustainability





STATISTICAL REPORTING COMMITTEE

CRA's Statistical Reporting Committee plays a quiet but vital role in data collection on behalf of our industry. The Committee works with CRA staff and consultants to ensure the timely, accurate, and robust reporting of data and statistics regarding the Association's product shipments and grind reports via oversight of the Statistical Reporting Program.

Trade associations like CRA employ data collection and analysis to facilitate, measure, and understand the industry's contributions to agriculture, the economy, and employment – serving as a bridge among members, while also strictly adhering to legal requirements that address the nature of trade association work. As a result, this committee often works with third

party service providers to ensure data collection and reporting meets these important standards. The results can be found in the back of this report – highlighting key trends and essential data for our industry.

DATA AND REPORTS

- Industry At A Glance Metrics
- Product Production Statistics
- Industry Shipments
- Grind Capacity and Volume
- International Trade Flows



ADDITIONAL CRA COMMITTEES



Co-Products Subcommittee

The Co-Products Subcommittee is responsible for overseeing and providing recommendations to the Product Safety & Quality Committee on industry issues that concern corn oil, corn gluten feed, and corn gluten meal.



Communications Committee

The Communications Committee is responsible for providing the Board recommendations regarding CRA education and marketing activities, the public image of CRA and the corn wet milling industry, and other communication matters.



Government Relations Committee

The Government Relations Committee is responsible for providing guidance, oversight, and support to CRA's government relations function, and recommendations to the Board regarding advocacy of CRA policy objectives.

CRA SAFETY AWARD WINNERS

CRA is pleased to announce the following winners of its 2019 Workplace Safety Awards.



CRA INCIDENT RATE EXCELLENCE AWARD

The Incident Rate Excellence Award recognizes facilities that have zero lost workdays and a total recordable incident rate under 1.0.

Archer Daniels Midland Company

Clinton, IA
Columbus, NE

Cargill, Incorporated

Dayton, OH
Hammond, IN
Wahpeton, ND

Ingredion Incorporated

Argo (Bedford Park), IL
Cedar Rapids, IA

Tate & Lyle Americas

Dayton, OH
Loudon, TN



ONE MILLION HOURS AWARD

The One Million Hours Award recognizes facilities that operate for one million consecutive hours without an employee lost workday.

TWO MILLION HOURS!

Archer Daniels Midland Company

Clinton, IA
Columbus, NE

Cargill, Incorporated

Blair, NE
Dayton, OH

Ingredion Incorporated

Argo, IL

Tate & Lyle Americas

Loudon, TN



ZERO LOST WORKDAYS AWARD

The Zero Lost Workdays Award recognizes facilities that for operating a full calendar year without an employee lost workday.

Archer Daniels Midland Company

Clinton, IA
Clinton BIO, IA
Columbus, NE
Marshall, MN
Peoria, IL

Cargill, Incorporated

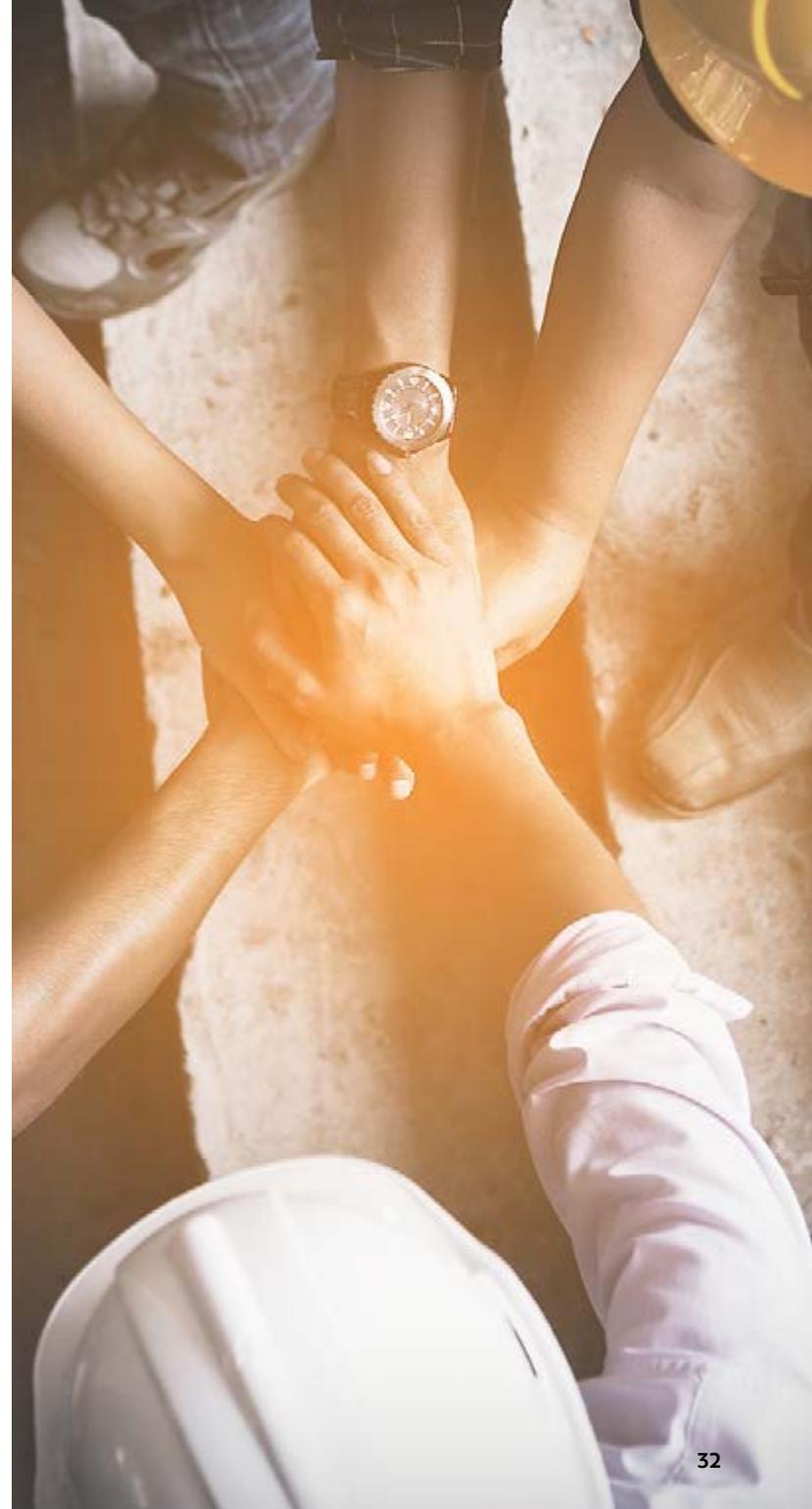
Cedar Rapids, IA
Dayton, OH
Ft. Dodge, IA
Hammond, IN
Indianapolis, IN
Wahpeton, ND

Ingredion Incorporated

Argo (Bedford Park), IL
Cedar Rapids, IA
Indianapolis, IN
Winston-Salem, NC

Tate & Lyle Americas

Dayton, OH
Loudon, TN

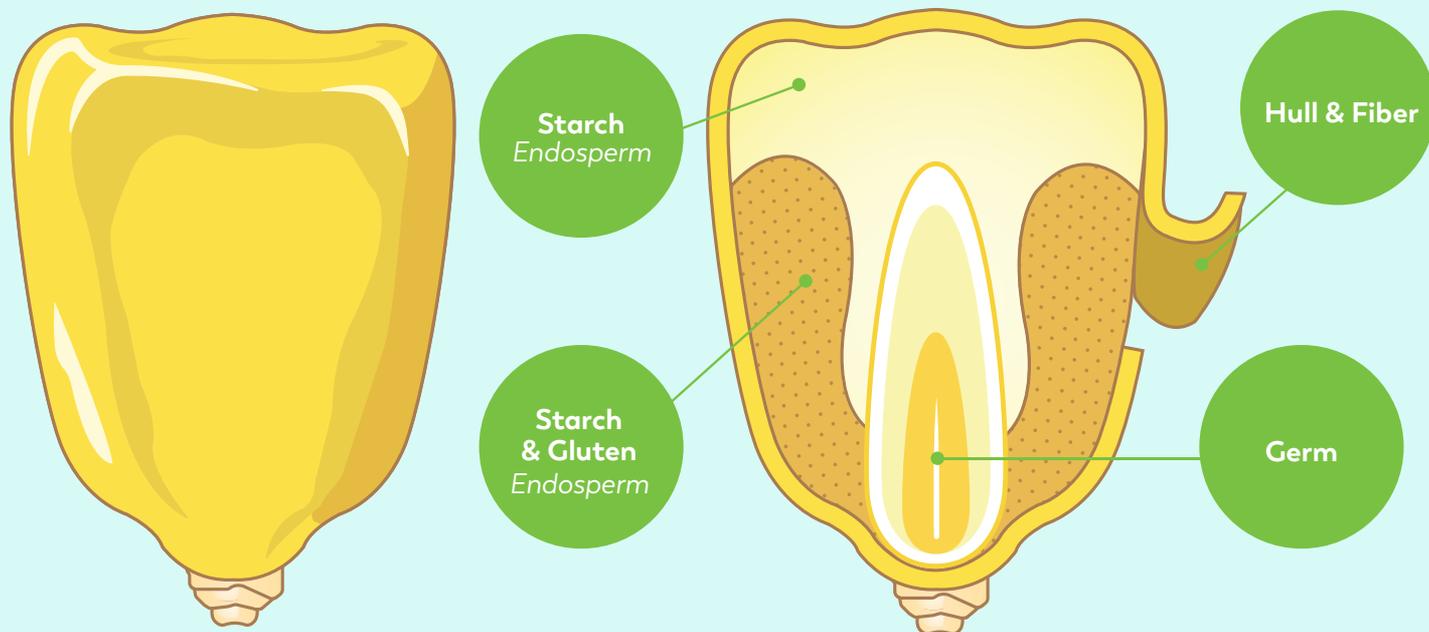


CORN REFINING – THE FOUR COMPONENTS OF THE KERNEL

It is incredible to think all of these products — from bioplastics to those found in our Kernel of Innovation campaign (pages 13-16) — all incorporate corn products.

Yet, it all starts with corn refining. For more than 150 years, the corn refining industry has been perfecting the process of separating corn kernels into their component parts. Through corn wet milling, a kernel is divided into starch, germ, fiber, and protein.

The award-winning wet mills on the prior pages, and others as well, are the heart of the corn refining process. While these plants utilize the latest in technology, the core of the business has remained the same for a century-and-a-half. Since its beginning, mills have taken dent corn kernels and separated them into their component parts — starch, germ, fiber, and protein — and today those ingredients are an essential part of thousands of consumer and industrial products.



U.S. CORN REFINING INDUSTRY AT A GLANCE - 2019

25

**Corn Refining
Plants**

4

**Additional
Processing Plants**

10 states

Location

\$5.64

billion

**Value of Corn
Purchased**

**1.56 billion
bushels**

**(39.63 MMT)
Annual Corn Grind**

41,000

**Number of
Corn Suppliers**

7,194

**Employment
by CRA
Member
Companies**

\$20.28

billion

**Capital Investment
(Replacement Value)**

\$10.89

billion

**Value Added by
Manufacture**

MAJOR PRODUCTS

**26.29
billion
pounds**

(11.92 MMT)

Sweeteners

(dry weight)

**7.26 billion
pounds**

(3.29 MMT)

Starches

**1.44 billion
gallons**

Ethanol

**27.30
billion
pounds**

(12.38 MMT)

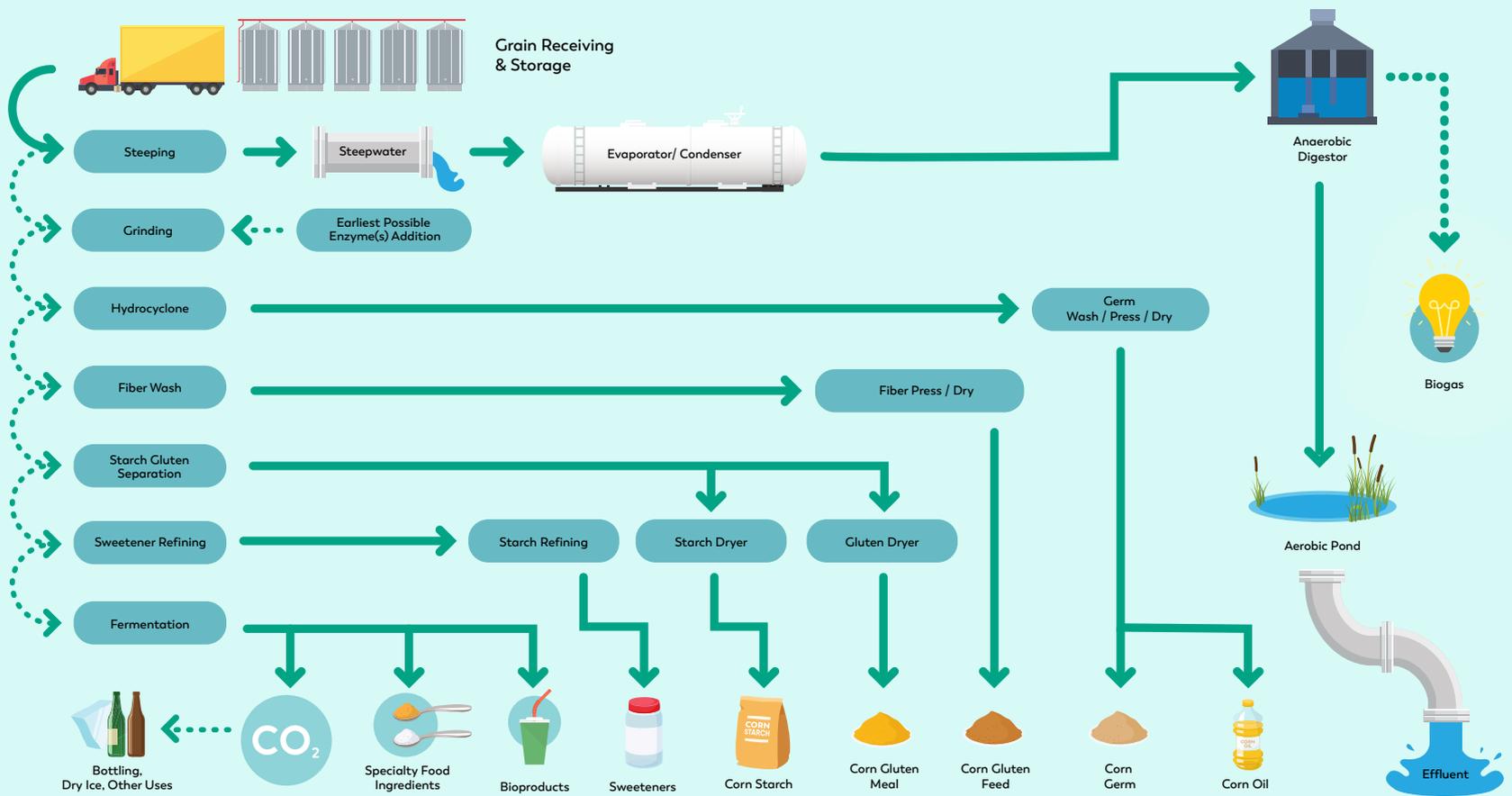
Co-products

*MMT = million metric tons

Compiled by the Corn Refiners Association based on data from the U.S. Department of Agriculture, Bureau of Labor Statistics, LMC Commodity Studies, Renewable Fuels Association, Energy Information Administration, and industry data compiled for CRA by Vault Consulting, LLC. Figures are representative of entire U.S. industry.

THE CORN REFINING PROCESS SIMPLIFIED

When corn wet milling began in the 1840s, the process utilized gravity, flat-bottom wooden tanks, and wooden shakers, and some of the kernel's separated components were discarded as waste. Today, corn wet millers utilize central process control computer systems and stainless steel membranes. In addition, what was once considered waste energy is today being recirculated throughout the system. And of course, **we utilize every component of the kernel.**



Based on a report from the University of Illinois at Urbana-Champaign, May 2016

DOMESTIC PLANT LOCATIONS 2020



Archer Daniels Midland Company

P.O. Box 1470, Decatur, Illinois 62525

www.adm.com

Domestic Plants:

- Decatur, Illinois 62525
- Peoria, Illinois 61602*
- Cedar Rapids, Iowa 52404
- Clinton, Iowa 52732
- Marshall, Minnesota 56258
- Columbus, Nebraska 68601
- Southport, North Carolina 28461*



Cargill

P.O. Box 5662/MS62, Minneapolis, Minnesota 55440

www.cargill.com

Domestic Plants:

- Hammond, Indiana 46320
- Cedar Rapids, Iowa 52406
- Eddyville, Iowa 52553
- Fort Dodge, Iowa 50501
- Blair, Nebraska 68008
- Wahpeton, North Dakota 58075
- Dayton, Ohio 45413



Grain Processing Corporation

1600 Oregon Street, Muscatine, Iowa 52761-149

www.grainprocessing.com

Domestic Plants:

- Muscatine, Iowa 52761
- Washington, Indiana 52353



Ingredion Incorporated

5 Westbrook Corporate Center, Westchester, Illinois 60154

www.ingredion.com

Domestic Plants:

- Bedford Park, Illinois 60502
- Indianapolis, Indiana 46221
- Cedar Rapids, Iowa 52404
- North Kansas City, Missouri 64116
- Winston-Salem, North Carolina 27107



Roquette America, Inc

1417 Exchange Street, Keokuk, Iowa 52632

www.roquette.com

Domestic Plants:

- Gurnee, Illinois 60031*
- Keokuk, Iowa 52632



Tate & Lyle Americas

(A subsidiary of Tate & Lyle, PLC)

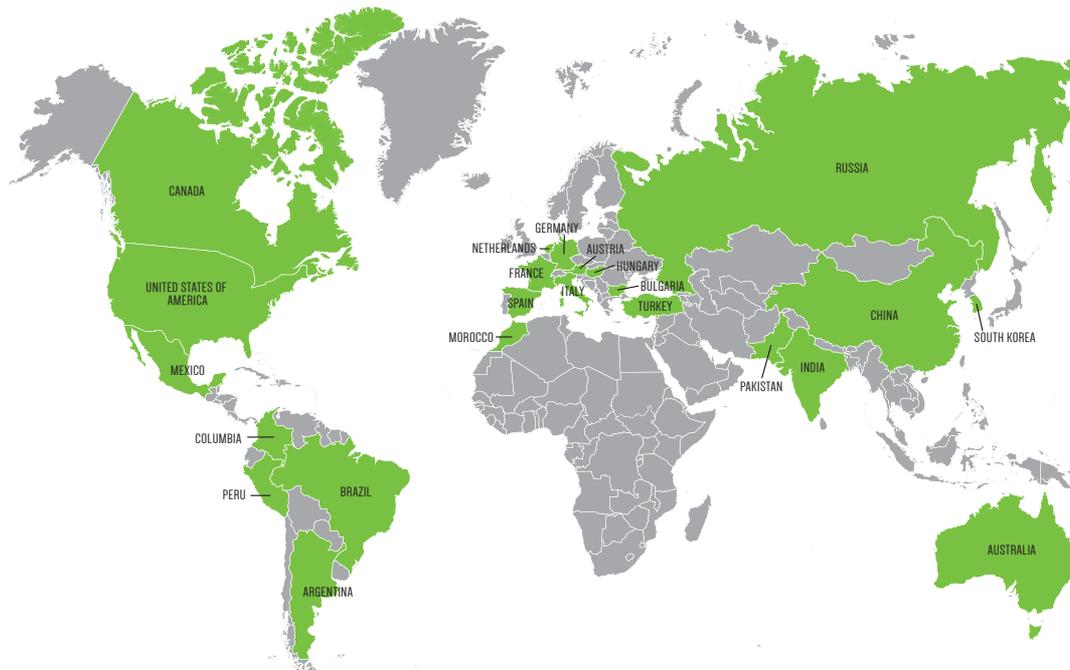
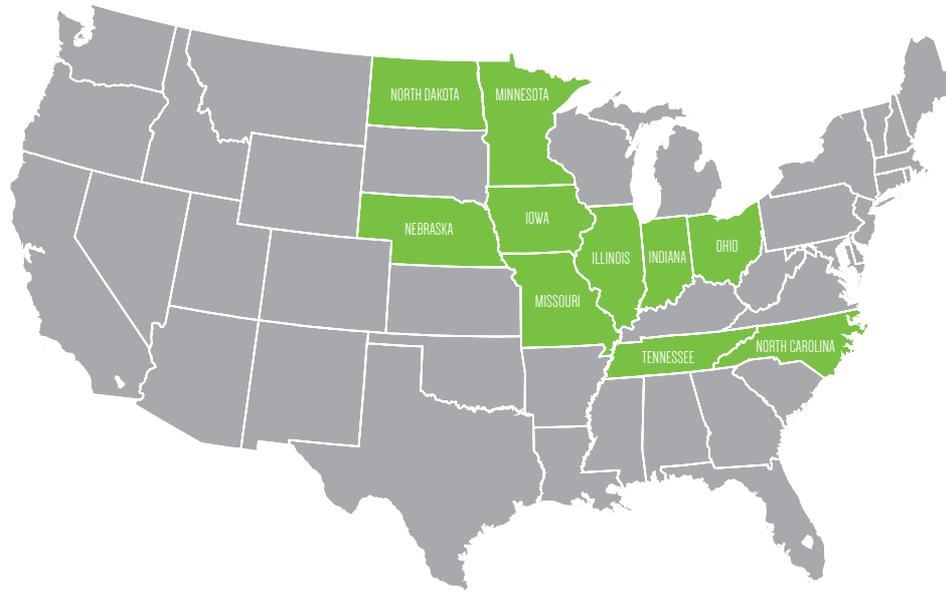
P.O. Box 151, Decatur, Illinois 62525

www.tateandlyle.com

Domestic Plants:

- Decatur, Illinois 62521
- Lafayette, Indiana 47902
- Lafayette, Indiana 47905
- Dayton, Ohio 45424*
- Loudon, Tennessee 37774

**Specialty corn-based refinement facilities.
Plants do not grind corn.*



CORN REFINERS ASSOCIATION MEMBER COMPANIES' PRODUCTS 2020

	Archer Daniels Midland Company	Cargill	Grain Processing Corporation	Ingredion Incorporated	Roquette America, Inc.	Tate & Lyle Americas
STARCH						
Unmodified, food	•	•	•	•	•	•
Unmodified, industrial	•	•	•	•	•	•
Modified, food	•	•	•	•	•	•
Modified, industrial	•	•	•	•	•	•
Dextrins	•	•		•	•	•
SWEETENERS						
Glucose syrups	•	•		•	•	•
Maltodextrins	•	•	•	•	•	•
Dextrose monohydrate	•	•		•	•	•
Dextrose anhydrous		•		•	•	
High Fructose Corn Syrup-42	•	•		•	•	•
High Fructose Corn Syrup-55	•	•		•	•	•
Crystalline fructose	•					•
REDUCED-CALORIE SWEETENERS						
Allulose	•			•		•
Erythritol	•	•				
Glucose hydrolysates		•		•	•	
Hydrogenated starch hydrolysates				•	•	
Maltitol	•	•		•	•	
Mannitol	•	•		•	•	
Sorbitol	•	•		•	•	
Xylitol		•			•	

CORN REFINERS ASSOCIATION MEMBER COMPANIES' PRODUCTS 2020

	Archer Daniels Midland Company	Cargill	Grain Processing Corporation	Ingredion Incorporated	Roquette America, Inc.	Tate & Lyle Americas
CO-PRODUCTS						
Crude oil	•	•	•	•	•	
Refined oil	•	•		•		
Corn gluten feed	•	•	•	•	•	•
Corn gluten meal	•	•	•	•	•	•
Corn germ or corn germ meal	•	•	•	•	•	•
Steepwater (CFCE)	•	•		•	•	•
Carbon dioxide	•		•			•
Corn fiber food/industrial ingredients	•	•		•	•	•
FERMENTATION AND OTHER PRODUCTS						
Citric acid	•	•				•
Lactic acid		•				
Lysine	•					
Threonine	•					
Xanthan gum	•	•				
Ethanol, fuel/industrial	•	•	•	•	•	•
Ethanol, beverage	•	•	•			

Product lists are accurate as of publication date, but may change with time.
(as of November 15, 2019)

SHIPMENTS OF PRODUCTS

Shipments of Products of the Corn Refining Industry – 2019	Pounds, commercial weight		Converted
Starch Products <i>(includes corn starch, modified starch, and dextrins)</i>	5.39	billion	2.45 MMT
Refinery Products <i>(includes glucose syrup, high fructose corn syrup, dextrose, corn syrup solids, maltodextrins)</i>	30.93	billion	14.03 MMT
High Fructose Corn Syrup 42%	5.91	billion	2.68 MMT
High Fructose Corn Syrup 55% and Above	10.90	billion	4.95 MMT
Total High Fructose Corn Syrup	16.82	billion	7.63 MMT
Total — Domestic Basic Products	36.32	billion	16.47 MMT
Total — Export Basic Products	4.05	billion	1.84 MMT
Corn Oil — Crude and Refined	1.30	billion	0.59 MMT
Corn Gluten Feed and Corn Oil Meal	11.14	billion	5.05 MMT
Corn Gluten Meal	1.88	billion	0.85 MMT
Steepwater	2.49	billion	1.13 MMT

Compiled for the Corn Refiners Association by Vault Consulting, LLC. Statistics represent shipments by members of the Association. Shipments are in pounds, commercial weights, and do not include co-products derived from ethanol production.

HONORARY DIRECTORS *

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Archer Daniels Midland Company

Samuel C. Scott

Corn Products International, Inc.

Richard Vandervoort

Corn Products International, Inc.

Rick Kyle

Ingredion Incorporated

**Listed with their current (or prior) member company affiliation.*

*This report is dedicated to the memory of **E.S. Micek of Cargill** in appreciation of his dedication and enthusiasm for advancing the corn refining industry.*





CRA

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