GIRACT

Starch*Italics*

Starch Industry Overview
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STARCH INDUSTRY OVERVIEW

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Glossary

mio	'000 000
bio	'000 000 000
k	'000
lakh	'00 000
t	tons
kt	'000 tons
lpd	litres per day
klpd	kilo litres per day
tpa	tons per annum
tpd	tons per day
tph	tons per hour
tpm	tons per month
cpd	cases per day
JV	Joint Venture
M&A	Merger & Acquisition
pa	per annum
Sensex	Bombay Stock Exchange Index

Cosun Potato Processing activities (Aviko) make up for decline in sugar

Royal Cosun announces an increase in its profit for 2016 in comparison with 2015. The projected decline in the profit on sugar was offset by firmer results on other activities, especially potatoes. The cooperative will pay EUR 44.15 per t of quota beet supplied during the 2016 campaign.

Consolidated turnover amounted to EUR 2 bio, the same as in 2015. Operating profit rose to EUR 77 mio (2015: EUR 59 mio). At EUR 55 mio, the net profit was significantly higher than in 2015 (EUR 46 mio), thanks mainly to non-recurring items.

Suiker Unie had a moderate year after several years of improved results. In view of the higher cost price triggered by the relatively small campaign in 2015, European sugar prices and low pulp prices, this was not unexpected. Turnover was at the same level as in 2015 and the profit decreased. Suiker Unie will continue to take cost control measures and strengthen its position on the European market, in part with a view to the abolition of EU quotas. Investments have therefore been made in recent years to increase capacity and consolidate the market presence. Economies of scale will also keep costs low in the future. Performance at the three sugar factories was excellent throughout the campaign.

Aviko performed extremely well in 2016. The company made the most of the openings on the sales markets and improved its operating efficiency. Aviko responded decisively to the lower availability of potatoes and improved its selling prices.

Both the sales mix and the sales volume of potato specialities and fries were improved, partly by higher exports. The granulate and flake activity (Aviko Rixona) performed well in 2016. We have identified opportunities for further growth in our potato activities.

Sensus posted better results than in the previous year. Production costs remained relatively low and the margin was wider. Sales in the US and Asia were lower but sales on the European market were higher. The 2016 chicory campaign was successful, with above-average root yields and inulin content.

SVZ reported better results than in 2015. They were underpinned by higher margins in Europe, chiefly because of a better product mix and efficiency gains. A mismatch in stock positions depressed the result in the US. Demand for fruit juices was lower whereas demand for vegetable juices was higher. This trend prevailed throughout 2016.

Duynie realised a weaker result in 2016. The weakness in livestock farming fed through into the animal feed activities. Novidon, the starch activity, performed better, as did the unit that supplies biomass for biodigesters. The new pet food ingredient activity is developing well.

Development and innovation

Cosun is seeking profitable growth in existing and new activities that extract value from vegetable raw materials. All Cosun's business groups are working on product and process innovation. Cosun started construction work for

a new innovation centre at the Nieuw Prinsenland Agro & Food Cluster site in 2015. The Cosun R&D staff will move to the new centre in the summer of 2017. R&D professionals from the Cosun businesses will also use the facilities at the Cosun Innovation Center. IRS will move to this new location in 2018.

2016 beet price

The price paid to members for their beet is made up of the minimum EU price, the member's bonus, the sugar content premium and other payments. The price paid for quota beet supplied in the 2016 campaign has been set at EUR 44.15 per t (2015: EUR 43.01) for beet with average extractability and average sugar content. The Dutch sugar harvest in the 2016 season yielded 13.3t of sugar per hectare. This is less than in previous years, partly because of the less favourable weather conditions during the growing season, but it is still good. The campaign in the Netherlands lasted 109 days and produced a total of 934kt of sugar from beet. A substantial volume of white sugar was also produced from raw cane sugar. The average financial yield per hectare for the farmers was EUR 3 317 in 2016 (2015: EUR 3 301).
(potatopro.com 09 February 2017)

NASS adds nearly 1 mio cwt. to ND potato production estimate

In January, USDA-NASS made large adjustments in fall potato production estimates in both North Dakota and Minnesota. North Dakota gained 960 000 hundredweight (cwt.) while the Minnesota estimate dropped 870 000 cwt.



NORTH DAKOTA - Bruce Huffaker, potato analyst and publisher of North American Potato Market News agreed with our assessment that the USDA had over-estimated potato losses in North Dakota based on the number of acres lost while not recognizing the vast majority of those acres were on lower yielding non-irrigated land. Huffaker summed it up best. "USDA has started to recognize the bipolar nature of the state's 2016 potato crop. Heavy rains caused severe damage to crops in the Red River Valley, but irrigated crops grown further west produced record, or near-record yields." Taking that into consideration, USDA upped its average yield estimate for the state from 310 cwt./acre to 325. It should also be noted the losses were concentrated on fresh, chip and seed acres. Frozen processors will have plenty of potatoes in North Dakota.

MINNESOTA - In Minnesota the USDA dropped its potato production estimate by 870 000 cwt. after lowering their acres planted and harvested by 3 000 acres. Huffaker noted a pattern in Minnesota estimates. "The USDA has developed a habit of overestimating the state's potato area early in the season, only to revise the number downward in January. This is the third consecutive year that USDA has revised the

state's harvested area down by a significant amount, on January 1."

UNITED STATES - The USDA only made minor adjustments in fall production estimates in other states. When all tallied up, the U.S. production estimate was changed very little, increasing slightly from 405.17 mio cwt. to 405.95 mio cwt. U.S. fall production is still up 1.9% compared to 2015.
(agweek.com 07 February 2017)

Soybean processing plant to be built in Spiritwood, ND

Minnesota Soybean Processors, based in southwest Minnesota, has announced it will build a USD 240 mio soybean meal, oil and biodiesel plant in Spiritwood, N.D. Company officials have yet to raise all of the funds for the project, but say they are optimistic it will start bringing in soybeans in the fall of 2018. If completed, North Dakota Soybean Processors will take 125 000 bushels of soybeans a day and would add value to the crop for soybean growers in the region, which has grown in prominence for soybean production in the past 20 years. The project would produce soybean meal, refined, bleached and deodorized soybean oil, and biodiesel fuel.

North Dakota Gov. Doug Burgum made the announcement Feb. 7 at the North Dakota Soybean Expo in Fargo, N.D., acknowledging the value-added goal has been shared by previous governors, and work on the project was done by the farmers themselves. The company would employ 55 to 60 people ongoing.

Burgum, whose family is heavily involved in agriculture, noted the state typically produces 200 mio bushel soybean crop in North Dakota the plant, operating 340 days a year, would take more than 42 mio bushels per year of processed soybeans.

Typically, about 75% of the North Dakota soybean crop is exported, primarily through inland terminals and rail to the Pacific Northwest and to Asian markets, including China. This plant would mean more of the production would be used regionally, including as a source of soybean meal for the livestock producers in Canada.

The North Dakota project will be slightly larger than the Minnesota project, which stands on the line of Nobles and Jackson counties. The new plant will take an amount equal to about 22% of North Dakota's soybean crop, but will draw beans from surrounding states. The idea for building a "source" plant, near the source of soybeans in North Dakota started with MnSP board and management, who met with Bill Zurn of Calloway, Minn., a leader of Minnesota soybean organizations. He had previously attempted to get soybean processing started in the Kindred, N.D., area. Zurn became chairman of a steering committee that searched for opportunities in Minnesota and North Dakota, before settling on Spiritwood. MnSP will do the managing and marketing for the North Dakota plant, which is somewhat larger than South Dakota Soybean Processors in Volga, S.D. Water for the Spiritwood plant is going to come from Stutsman County Rural Water. A soybean plant doesn't use water for manufacturing, but will use steam generated by the Great River

Energy electrical generation facility, meaning it will use only half of the water needed at Brewster.

Hill said the Spiritwood plant location — associated with an ethanol plant, barley malting plant and electrical generation facility, and a potato processing plant — is favorable because of sewage systems, rail mainline, double-circle track set-up and access to Interstate 94, with a 10t road to the plant. (agweek.com 07 February 2017)

Corn consumption update

Since early October, the March 2017 corn futures prices have fluctuated in a price range between USD 3.40 and USD 3.70. USDA's World Agricultural Supply and Demand Estimates report released on Jan. 12 presented a mixed signal on corn consumption forecasts with a reduction of 50 mio bushels in feed and residual use and an increase in corn used for ethanol by 25 mio bushels for the 2016-17 marketing year.



The export forecast remained unchanged. Corn prices reflected this information with a moderate response to the 78 mio bushel reduction in production reflected in the Crop Production report that was released on the same day. According to University of Illinois agricultural economist Todd Hubbs, the current pace of corn consumption indicates corn prices may stay in the price range from USD 3.40 - USD 3.70 for the next several weeks.

"Thus far in the marketing year, corn exports exhibited considerable strength," Hubbs says. "Exports through the first quarter of the marketing year came in at 551 mio bushels. Accumulated exports through Jan. 19 are 744.5 mio bushels. This is a 68% increase over the same period last year." Outstanding sales for this marketing year through Jan. 19 are 793.4 mio bushels. Total commitments currently sit at 69% of the USDA projection of 2.225 bio bushels. Export shipments and outstanding sales increased during the last three weeks. "The developing issues with trade policy create uncertainty over the future trajectory of corn exports," Hubbs says. "At the current pace, the USDA forecast looks attainable despite significant competition due to emerge from South American corn production."

The pace of corn consumption for feed likely increased from a year ago, Hubbs says. The increase in feed consumption is more modest than initial USDA forecasts and, thus, the 50 mio bushel reduction on Jan.12. Livestock production increases in many sectors provide support for increased corn feed use during this marketing year. The number of cattle on feed on Jan.1, 2017, was slightly larger than last year at 10.61 mio head. Placements into feedlots during December 2016 were 17.6% larger than last year at 1.79 mio head.

Currently, the pace of corn consumption appears to be large enough to maintain old-crop corn prices in the USD 3.40 to USD 3.70 price band for the next several weeks, barring some economic or policy disturbance, Hubbs adds. "There are no indications currently for higher price movements. A possibility of weakness in corn consumption related to corn used for ethanol production may be forming as ethanol stocks begin to build.

A large upward price movement requires a substantial increase in the pace of shipments to export markets, which possesses significant uncertainty concerning our major trading partners, or the emergence of production issues in South America."
(agweek.com 31 January 2017)

USDA reports provide support to corn and soybean prices

In the early January, the USDA released a set of reports with major implications for corn and soybean prices in 2017. The National Agricultural Statistics Service released the final estimates of the 2016 U.S. corn and soybean crops and estimates of the stocks of corn and soybeans in storage as of Dec.1, 2016.

Additionally, the World Agricultural Outlook Board released new forecasts for U.S. and world supply, ending stocks, and consumption levels during the 2016-17 marketing year on both crops. According to University of Illinois agricultural economist Todd Hubbs, these estimates and forecasts will affect corn and soybean price dynamics through the spring of 2017.

Hubbs provides the following to recap corn and soybean crop estimates and the price implications associated with them. Soybean production for the United States in 2016 is estimated at 4.307 bio bushels. Production is down 1% from the November forecast of 4.36 bio bushels but is still a record level of production. The harvested acreage estimate of 82.7 mio acres is down from the November forecast of 83.0 mio acres. Average soybean yield of 52.1 bushels per acre is 0.4 bushels lower than the November forecast.

The World Agricultural Supply and Demand Estimates report maintained the forecasts for major soybean consumption categories projected in the December 2016 report. Soybean crush and exports retained the forecast levels of 1.93 and 2.05 bio bushels respectively.

Total use is forecast at 4.108 bio bushels. At 420 mio bushels, the ending-stocks forecast decreased 60 mio bushels based on lower soybean production. The U.S. marketing-year average price is projected in a range of USD 9 to USD 10, compared to last month's projection of USD 8.70 to USD 10.20.

Corn production for the United States in 2016 is estimated at 15.15 bio bushels. Production is down 1% from the November forecast of 15.2 bio bushels. The harvested acreage estimate of 86.7 mio acres is down from the November forecast of 86.8 mio acres. Average corn yield of 174.6 bushels per acre is 0.7 bushels lower than the November forecast. Dec. 1 corn stocks came in at 12.38 bio bushels, a record high. The estimate is 84 mio bushels above trade expectations and indicates a total

disappearance of 4.56 bio bushels in the first quarter of the marketing year. The lower domestic supply numbers combined with higher stocks indicating lower-than-expected corn use sent a mixed signal for corn prices. The WASDE report for U.S. corn forecast during 2016-17 reflected the dichotomy of the corn reports. At 5.6 bio bushels, the forecast for corn feed use and residual moved lower by 50 mio bushels. An increase in the ethanol use forecast by 25 mio bushels offset the feed use forecast reduction for the marketing year. United States exports for corn maintained the 2.225 bio bushels forecast in December. The ending stocks forecast came in at 2.35 bio bushels for the 2016-17 marketing year. The ending stocks forecast is 48 mio bushels lower than the December forecast. The range of the U.S. marketing-year average price increased by 5 cents from the December projection to a projected in a range of USD 3.10 to USD 3.70.

The reports provide support for soybean prices in the short term and are ambivalent for corn prices. Despite lowering corn and soybean ending stocks forecasts, one cannot ignore the large crop potential currently unfolding in South America and the implications for U.S. exports in 2017.

Corn and soybeans prices will reflect the pace of consumption and crop prospects in South America. Corn prices will likely average in the upper range of the USDA's projection through the spring while soybean prices show the potential for falling into the lower half of the projected range as we move through the marketing year.
(agweek.com 17 January 2017)

Bushmills Ethanol plans expansion pending MPCA review

Pending the outcome of an environmental review, Bushmills Ethanol Inc. near Atwater will expand its facilities and increase annual production of denatured ethanol from 65 mio gallons a year to 100 mio gallons.

Bushmills, a cooperative comprised of 415 farmers, owns a dry mill plant about 1½ miles west of Atwater that began operating in December of 2005. The proposed expansion, which includes four new 730 000-gallon fermenters and several smaller above-ground storage tanks to be built on the plant's nearly 81-acre site, would add 3.3 acres of new impervious surface to the facility site.

According to the worksheet, the existing ponds on the Bushmills property are large enough to handle additional storm water runoff. The amount of corn processed at the plant would increase from 25 mio to 38.5 mio bushels per year and the amount of water used at the plant would go from 216 mio gallons to 225 mio gallons per year. Besides increasing local demand for corn and production of ethanol by 35 mio gallons a year, the proposed project would also increase production of dried distillers grain and wet cake that would benefit local livestock farmers, according to Bushmills. As required by state rules, the Minnesota Pollution Control Agency prepared an environmental assessment worksheet on the proposal that provides basic information about how the project could potentially affect the environment.
(agweek.com 11 January 2017)

Wheat acreage outlook is grim

Erica Olson, marketing specialist for the North Dakota Wheat Commission, presented in the Memorial Building gymnasium during the 2017 NDSU Extension Service Roundup in Devils Lake, N.D. on January 4, 2017. Erica Olson wanted to be positive about wheat but she also wanted to be realistic, too.

"We've seen a perfect storm of ideal production for four straight years," said Olson. Though wheat consumption is at a record high and growing, "We do have a surplus of wheat" — and that's dampening the outlook for farmers who grow it. Farmers generally say they like hard red wheat and want to continue growing it, but are concerned that its low prices offer too little profit potential. "It's not the lowest wheat prices we've ever seen, but it's the lowest wheat prices we've seen in quite a few years," Olson said. But the outlook for hard red spring prices isn't the same as for wheat, overall.

Six classes of wheat are raised in the U.S. Hard red spring, sometimes known as the "aristocrat of wheat," is valued for its high quality and is particularly attractive to consumers interested in quality, rather than price. "We're definitely focusing on quality buyers," Olson said of the North Dakota Wheat Commission. "We're not always selling the largest quantity anymore, but we are still the quality supplier." Though world wheat supplies are high "and weighing on the market," the supply of high-quality wheat is tighter and is expected to tighten further, which is good for hard red spring, Olson said. A potential upturn in investment fund activity in the futures market could help wheat futures at the Chicago Board of Trade, but is less likely to do so for futures at the Minneapolis Grain Exchange, she said.

North Dakota farmers also are the nation's leading producers of durum, which is used to make pasta. Farmers in the state generally harvested a bumper durum crop, possibility their biggest ever, in 2016. But the crop suffered serious, widespread problems with vomitoxin, which can affect flavors in food and processing performance. Though human health isn't at risk, miller try to limit vomitoxin levels, and that's led to sharp price discounts for vomitoxin-infected durum. Canada, the world's largest durum exporter, also had a big, but vomitoxin-riddled durum crop. That raises the question of whether there's enough high-quality durum to meet demand. For now, the grain market says, yes, there is enough, but that could change by spring, Olson said. "These next few months will be pretty tell-tale for the durum market," she added.
(agweek.com 09 January 2017)

British Sugar says end of EU quotas is a chance to boost beet production

That is one of the key messages in a report released by British Sugar to highlight the economic value of this "home-grown success story" and the opportunities to continue its development.

As the only processor of UK-grown sugar beet, the firm works with 3 500 growers, employing 1 400 people and supporting a further 9 500 skilled jobs – the majority of which are in East Anglia, where the lion's share of the nation's beet crop is grown and processed.

The report says more than GBP 250 mio has been invested during the last five years to improve efficiencies at British Sugar's four factories at Cantley near Acle, Wissington near King's Lynn, Bury St Edmunds in Suffolk and Newark in Nottinghamshire.
(sucrosenews.com 21 February 2017)

Sweegen Announces Successful Commercialization of Bestevia™ Reb-M

SweeGen, Inc. announced the successful commercialization of its Bestevia™ Reb-M, the company's non-caloric and high purity stevia sweetener with an unparalleled, clean, sweet taste, which is comparable to regular table sugar. Customer feedback on the product has been exceptional, which includes a major global beverage company that recently used SweeGen's Bestevia™ Reb-M in its large-scale trial for one of its bottled beverages.

SweeGen's Bestevia™ Reb-M, is the first sweetener of its type to be made commercially available via bioconversion. As the global demand for sugar continues to increase while production decreases, and companies are faced with a tax on high-sugar products, SweeGen's Bestevia™ Reb-M produced through enzymatic conversion becomes the obvious choice for food and beverage manufacturers, as well as consumers.

The production of SweeGen's Bestevia™ Reb-M uses proprietary and patent-pending bioconversion technologies utilizing natural steviol glycosides derived from the stevia leaf to achieve a high-quality sweetener that is well suited for food and beverage applications. With expected and upcoming regulatory compliance in major markets, competitive pricing, a superior taste profile and high purity, SweeGen's Bestevia™ Reb-M is clearly set apart from the competition and establishes a new standard for the sweetener industry.
(sweegen.com 21 February 2017)

World sugar market to be in deficit for second consecutive year in 2017

Informa's Agribusiness Intelligence vertical, a leading provider of news, data, analysis and forecasts across the agricultural and commodities value chain, has outlined its predictions for the sugar and ethanol commodities market as part of its Agribusiness Annual 2017. The Annual shows global commodities will paint a varied picture in 2017, but worldwide sugar production will fall short of consumption for a second year in a row in 2017, leading to an expected increase in prices.

While sugar lost 65% of its value between 2011 and 2015, last year was the first year that prices posted healthy gains. Given the continued deficit prices are expected to remain firm for most of 2017 as well. Around the world, the low cost of fuel, weather conditions and new domestic policy will all play a role in sugar and ethanol prices in the year ahead.

Sugar prices increase as global supplies wane

Recent declines in global production mean there could be a sizeable world sugar deficit tonnes in 2017 following world production declining significantly in 2015/16. Weather has had a stark effect on production around the world and, while production is likely to recover somewhat in 2016/17, this will not be enough to prevent the market from being in a deficit for the second year in a row.

Policy and climate impact farmers output

Around the world different policies and weather patterns are impacting different sugar markets in new and unpredictable ways. The 2016/17 sugar year will be the last when EU output will be constrained by the current system of production quotas and minimum prices for sugar Beet will be removed. Given the uncertainty over potential low prices, this could mean farmers switch to alternative crops, creating instability in the market. Over in China, currently the world's fourth largest producer and third largest consumer of sugar, despite government incentives cane production is wavering in the face of drought, poor prices and rising costs. In India, unfavourable weather has resulted in lower cane output, but weak domestic demand means that the need to import isn't expected as a necessity.

Low crude oil prices challenge Ethanol prices

Global ethanol output, meanwhile, is unlikely to set a new record high in 2017 as the world's top markets are near saturation points on the basis of current legislation. At the same time, distillers will find it difficult to compete against ultra-cheap gasoline even though supplies of starch-based feedstock will remain ample and inexpensive. In Brazil proposed changes in the fuel price policy could put more downward pressure on the price of ethanol. In the rest of the world, sugar-based ethanol will also take a hit as higher prices make this raw material much less competitive. Despite being Asia's second largest ethanol producer, Indian output is predicted to fall in 2017. Under a long-term plan, ethanol consumption in Thailand is predicted to rise to 9 mio litres per day by 2022 against 3.6 mio in 2015.
(commodities-now.com 31 January 2017)

Sweetener Producer Sorini Agro to Delist Shares on IDX

Sorini Agro Asia, a leading producer and supplier of the artificial sweetener sorbitol, plans to voluntarily delist its shares on the Indonesia Stock Exchange, or IDX, after failing to meet the minimum free-float requirement in Indonesia.

According to the company's prospectus released on Friday, its publicly traded stocks only comprise 1.3% of its paid-up capital and had 321 investors holding stock. Cargill Foods Indonesia, the local arm of global agribusiness Cargill, controls a 98.67% of stake in Sorini Argo.

IDX has reprimanded Sorini twice, once in February and a second time in August last year, making the company pay IDR 25 mio (USD 1 860) in fines. IDX also suspended Sorini Agro's shares on August 15 last year, which was listed under SOBI, shortly after the company announced it plans to delist from the bourse. As part of its plan, Sorini Agro will give shareholders the opportunity to sell their shares at a premium price of IDR 4 250 per share to the majority shareholders, 150% higher than its current trading share price, which closed on Friday at IDR 1 700 per share. Sorini Agro will announce further plans after the general shareholders meeting on February 28. If its shareholders do not approve, they will continue to remain as shareholders of the company once it goes private.

Sorini is one of the world's largest producer and suppliers of glucitol, an artificial sweetener, which operates eight manufacturing facilities across Indonesia. The company products include starch and starch-derived sweeteners, including liquid and powder sorbitol, maltitol, dextrose monohydrate, maltose and maltodextrin, all of which are used in the production of food and beverages, cosmetics and pharmaceuticals.

Sorini Agri booked IDR 2.34 bio in net income in the first nine months of last year, plunging 1 844% from the same period the year prior when it booked IDR 45.49 bio. The company posted IDR 1.13 trillion in revenue in the first nine months of last year, down 11.7% from a year prior when it booked IDR 1.28 trillion in revenue.
(jakartaglobe.id 20 January 2017)

Kröner-Stärke promotes chemical-free specialist starches

In 2017, leading German wheat starch producer for the food, non-food and animal feed sectors, KRÖNER-STÄRKE, is aiming to meet industry demand for chemical-free production with its extensive, totally natural, pre-gelatinised starches range. One of the most functional characteristics of pre-gelatinized starches is their ability to naturally bind substances without any chemical additives. This makes them an ideal natural binding agent for any manufacturer wishing to improve the environmentally-friendly or clean-label credentials of its products, whilst also benefiting from superior binding properties.

Producers in the food sector are currently experiencing a huge growth in demand from consumers for clean-label, chemical and additive free products. As part of its 2017 strategy, KRÖNER-STÄRKE has developed a versatile choice of cold swelling pre-gelatinised starches which offer the food sector superior water-binding capacity, give a stable viscosity, allow for lump-free mixing and effectively stabilise batters, dough and emulsions. Ideally suited for bakery applications, the starches also serve to increase water absorption and increase dough hydration. Ultimately, they can help to extend the shelf life and freshness of a plethora of baked goods with advantages to both the consumer and to manufacturers' profits.

One of KRÖNER-STÄRKE'S pre-gelatinized cold-water swelling wheat starches includes WETGEL. Its flaky structure, excellent cold-water swelling properties and ability to

bind large amounts of liquid associated with dispersion properties make it a very efficient functional ingredient. It is particularly well-suited for application in delicatessen products, fruit preparations, juice binders, cake fillings, dietetic food, baked goods or vegetarian burgers. As a variance the product is also available as a powder or once combined with sugar, as a not too sweet and adhesive topping for products such as Stollen.

As a committed organic supplier, KRÖNER-STÄRKE takes responsibility for the whole lifecycle of its products, from the sowing and growing of the grain in the fields through to the processing and distribution of the finished product. Indeed, its core business philosophy is to harness the power of nature in order to turn grain into a multi-functional ingredient ideal for making environmentally sound and healthier products without sacrificing quality or revenues.

The firm's team of dedicated sector specialists and food technologists create individual solutions for its customers and guarantee products of the highest quality. It can supply a wide range of pregelatinised, organic, gluten-free flours and starches for use across a wide range of foods including processed meats, soups and sauces, baked goods and battered products. Having a reputation for technical excellence in new product development, KRÖNER-STÄRKE'S flours and starches can improve both the functionality and environmental credentials of products across sectors as diverse as food, fertilizers, animal feed, corrugated board, coal briquettes and adhesives.
(starchpros.com 18 January 2017)

American Crystal Sugar stock sales slightly down from last year

Shares of American Crystal Sugar Co. are trading slightly less than at this time last year, but values have shifted slightly higher in recent weeks. On Jan. 3, 165 shares of American Crystal Sugar Co. beet stock sold for USD 2 250 per share, while a separate sale of 43 shares sold for USD 2 250 per share on Dec. 29, according to FNC Ag Stock, LLC, in Grand Forks, N.D. These levels for shares of the farmer-owned closed cooperative are slightly higher than the 75 shares sold at USD 2 050 per share during the week of Dec. 18, and the USD 2 100 per share for 30 shares the prior week.

"Currently, the lowest listed price is USD 2 350" per share, FNC noted on Jan. 3, a repeat of the amount noted on Dec. 27. "The highest standing offer to purchase is 35 shares at USD 2 250," the company said. FNC Ag Stock in Grand Forks is a subsidiary of Farmers National Company, based in Omaha. During the week of Dec. 11, the company handled sales of 10 shares at USD 2 250 per share; 10 shares at USD 2 200 per share. As of Dec. 19, the company's lowest listings were for 30 shares at USD 2 200 per share and 150 more at USD 2 250.

On Nov. 21, FNC Ag Stock had not had a beet stock sale since the 2016 crop forecast payment was released. The lowest listed price at the time was USD 2 500 per share. FNC Ag Stock registered its earliest seasonal sales ever at the end of August when they facilitated the sales of 361 shares at USD 2 650, according to the website. Then from August to the end of

October the company moved 1 421 shares, which was the most activity they've ever had prior to Nov. 1, said ag stock specialist Jayson Menke.

After the company came out with a projected payment for 2016 beets at USD 38 per t, there weren't any sales for about six weeks, Menke noted. The lowest share price offered for sale during that period was at USD 2 500 and the buyer interest was in the low USD 2 000 range. Menke declined to say what factors might be affecting beet stock sales.

At the company's annual meeting in early December, growers speculated future stock sale prices would be affected by several factors, including the price of other farming enterprises, further marketing acceptance of GMO beet sugar, as well as upcoming labor negotiations for a union contract that expires in July 2017. The company has said it doesn't want a repeat of the schedule that produced July 31, 2011, lockout of workers. The company locked out employees for 22 months, through May 2013.
(agweek.com 09 January 2017)

Foods rich in resistant starch may benefit health

A new comprehensive review has examined the potential health benefits of resistant starch. The review includes research suggesting it can aid blood sugar control, support gut health and enhance satiety via increased production of short chain fatty acids.

Resistant starch is a form of starch that is not digested in the small intestine and is therefore considered a type of dietary fiber. Some forms of resistant starch occur naturally in foods such as bananas, potatoes, grains, and legumes, and some are produced or modified commercially and incorporated into food products. There has been increasing research interest in resistant starch, with a large number of human studies published over the last 10 years looking at a variety of different health outcomes such as postprandial glycemia, satiety, and gut health.

The review summarizes reported effects and explores the potential mechanisms of action that underpin them. For example, there is consistent evidence that consumption of resistant starch can aid blood sugar control. It has also been suggested that resistant starch can support gut health and enhance satiety via increased production of short chain fatty acids. “We know that adequate fiber intake--at least 30 g per day--is important for achieving a healthy, balanced diet, which reduces the risk of developing a range of chronic diseases,” says Dr. Stacey Lockyer, co-author of the Nutrition Bulletin review.

“Resistant starch is a type of dietary fiber that increases the production of short-chain fatty acids in the gut, and there have been numerous human studies reporting its impact on different health outcomes.” Lockyer adds, “Whilst findings support positive effects on some markers, further research is needed in most areas to establish whether consuming resistant starch can confer significant benefits that are relevant to the general population; however this is definitely an exciting area of nutritional research for the future.”
(starchpros.com 05 January 2017)

Ingredion Incorporated announces nine additions to non-GMO project Verification

Ingredion Incorporated, a leading global provider of ingredient solutions to diversified industries Non-GMO Project Verified, today announced nine additions to the company's key sweetener, texturizer and nutrition solutions that have achieved Non-GMO Project Verified status, bringing the total Non-GMO Project Verified ingredient solutions to 57.

The Non-GMO Project offers independent verification for products made according to rigorous best practices for GMO (genetically modified organisms) avoidance. Ingredion's Verified products are produced in compliance with the Non-GMO Project Standard, which means that ongoing testing of all GMO risk ingredients, facility inspections and an annual audit ensure the company meets the highest standards currently available for GMO avoidance.

The following 9 products have been added to our growing list of Non-GMO Project Verified products: - GLOBE® 10 DE Maltodextrin NON GMO IP, - GLOBE 15 DE Maltodextrin NON GMO IP, - GLOBE 18 DE Maltodextrin NON GMO IP, - ULTRA-CRISP® CS corn starch, - NOVATION PRIMA® 340, instant functional native starch, - NOVATION PRIMA 350, instant functional native starch, - NOVATION PRIMA 300, functional native starch, - NOVATION PRIMA 600, functional native starch, - NOVATION ENDURA® 0100 functional native starch.

According to Mintel GNPD, non-GMO product launches with sweeteners as an ingredient have been on the rise since 2009. Ingredion manufactures its non-GMO maltodextrins in North America, which allows shorter lead times. The NOVATION functional starches enable food manufacturers to develop clean label foods that keep their indulgent textures following cold temperature storage. The starches offer a wide range of process tolerance and stability advantages in applications such as dressings, sauces, ready meals, yogurts and dairy desserts.

Non-GMO Project Verification underscores Ingredion's TRUETRACE™ traceability program, which protects the purity of the company's non-GMO offerings via, third-party-audited best practices for segregation and documentation of non-GMO corn.
(starchpros.com 05 January 2017)

Tate & Lyle celebrates completion of major energy efficiency and CO2e reduction project in Tennessee

Tate & Lyle PLC has opened its new co-generation plant at its corn wet milling facility in Loudon, Tennessee. The new natural gas-fired combined heat and power system, representing a USD 60 mio investment by Tate & Lyle, will significantly improve energy and operational efficiency at the Loudon facility, and reduce greenhouse gas emissions by nearly 50%. Tate & Lyle's global CO2e emissions will also be reduced by around 10% as a result of this investment.

The natural gas for the combined heat and power system will be supplied through a new dedicated pipeline which, as well as meeting Tate & Lyle's energy needs, will provide the wider area with additional natural gas capacity to support local economic development efforts.

Vicky Bullivant, Vice President, Sustainability, Tate & Lyle said: "This is one of the largest carbon reduction projects carried out by Tate & Lyle, and clearly demonstrates our strong commitment to reducing our impact on the environment. This major investment reduces Tate & Lyle's global CO2e emissions by around 10%, providing a step-change in our global carbon footprint."

Gerry Schlueter, Plant Manager, Loudon, Tate & Lyle added: "We've been working closely with the community and our local and state governmental representatives from the outset of this project, and I would like to thank them for their support." "This major investment has big wins for both Tate & Lyle and the local community. Tate & Lyle reduces its environmental footprint at the Loudon facility by nearly 50%, which benefits the local community, and the new pipeline will supply extra natural gas capacity to the wider area providing support for local economic development," he explains.
(starchpros.com 23 February 2017)

Novozymes launches advanced enzyme to boost ethanol yields

Novozymes announces the launch of the Spirizyme T Portfolio, an advanced suite of glucoamylase enzymes with trehalase and other yield enhancing activities that provide the most total sugar conversion in the industry.

Trehalase is an enzyme that converts trehalose, a type of sugar that cannot be fermented to ethanol, to glucose, which is easily fermentable. Trehalose makes up a significant part of the so-called DP2 peak, a measure of residual sugar in an ethanol plant. The more DP2 an ethanol plant can convert; the more ethanol it will produce.

Extensive plant trials of Spirizyme T showed that it reduced the amount of residual DP2 by up to 70%, the most in the industry. This would allow a 100 mio gallons per year (MGY) plant to convert 11 mio pounds of otherwise wasted sugar to approximately 700 000 gallons of additional ethanol per year. At current prices, this would add nearly USD 1 mio in revenue for the plant. Spirizyme T is available in three versions: Spirizyme Ultra T has the best DP2 reduction vs. cost;Spirizyme Excel T has the lowest total residual sugar for short fermentation

times; Spirizyme Achieve T has the greatest ability to reduce residual starch and sugar.

Novozymes Spirizyme T customers receive an extra layer of service through Novozymes' Advanced Laboratory Services. A team of specialized scientists examine fermentation samples before and after plant trials to determine DP2 peaks and calculate trehalose conversion. Additional plant data are analyzed to identify areas where customers can operate their plant more efficiently. Customers can get further support from Novozymes' Bioenergy University, which provides customized education and training to help plant employees advance their skills and knowledge.

"Enzymes are only part of the equation. Analytical services and training can help turn plant data into actionable improvements," Halling added. Spirizyme T will be available in North America immediately, followed by Latin America and Europe later in 2017.
(ethanolproducer.com 21 February 2017)

Poet-DSM plans enzyme manufacturing facility at Project Liberty

POET-DSM Advanced Biofuels will build an on-site enzyme manufacturing (OSM) facility in Emmetsburg, Iowa, pending state and local approvals.

The facility will be integrated into the Project Liberty technology package, replicable in future facilities. For Project Liberty, the OSM will directly pipe enzymes into the Liberty production process without requiring downstream processing, stabilizers and other chemicals required for enzyme transportation.

New enzymes developed by DSM are also expected to improve effectiveness of the enzyme mix, further reducing costs for the process. CRB has been awarded the contract for the design, engineering and construction management. Basic engineering is complete, and construction is expected to begin in late spring or early summer.

Project Liberty is a cellulosic ethanol plant that uses corn cobs, leaves, husk and some stalk to produce renewable biofuel. Over the last 18 months significant design improvements have been made to the plant and further investments to improve yields and make the process more consistent and reliable. The facility is producing at a rate of 70 gallons per bone-dry ton of biomass, near the target conversion rate, and is currently in a ramp-up phase. "Enzymes for cellulosic ethanol have been improving dramatically in recent years, and this is another leap delivered by our partner DSM in both cost and performance," POET President and COO Jeff Lautt said. "It will be a valuable addition to POET-DSM's integrated licensing package."

"We have reached some important production thresholds in recent months. This gives us the confidence to move to this next level of technology development," Atul Thakrar, President DSM Bio-based Products & Services said. "The startup and ramp-up of Project Liberty have provided valuable experience for developing a cost-effective process that can be replicated across the U.S. and world."
(ethanolproducer.com 20 February 2017)

AkzoNobel signs cooperation agreement on biobased polymer technology with Itaconix

AkzoNobel has signed a framework joint development agreement with specialty chemicals company Itaconix to explore opportunities for the production of biobased polymers.

With this agreement, AkzoNobel, an international corporation headquartered in Amsterdam, the Netherlands, will pursue the development and commercialization of bio-based polymers. Itaconix will contribute a proprietary polymerization technology to turn itaconic acid – obtained from sugars through fermentation – into polymers.

"This innovation enables the production of polymers from renewable ingredients, which fits closely with our Planet Possible sustainability agenda of doing more with less," explained Peter Nieuwenhuizen, RD&I Director for AkzoNobel's Specialty Chemicals business. "These biobased polymers offer unique properties in applications essential to our everyday lives, ranging from water quality to cleaning and hygiene."

Itaconix is a US subsidiary of Revolymer, which is also working with AkzoNobel on a marine coatings project. Kevin Matthews, CEO of Revolymer, said: "AkzoNobel has worldwide capabilities to utilize our itaconic acid polymers in many application areas. We believe this agreement is an important step for the further development of bio-based chemistry on a large scale."
(bioplasticsmagazine.com 30 January 2017)

Lesaffre inaugurates a new yeast drying facility in Alabama

On Jan. 10, Antoine Baule, CEO of Lesaffre; Thomas Benner, president and CEO at Lesaffre Yeast Corporation LLC and Red Star Yeast; and Didier Masy, general manager of Leaf – Lesaffre Advanced Fermentations, inaugurate the new Lesaffre Yeast Corp. drying facility in Headland, Alabama, and celebrate the launch of Leaf's new bioengineered yeast for ethanol production.

The event marked the inauguration of Lesaffre's first yeast drying facility in the United States. The drying facility is located in Headland, where Lesaffre and Red Star Yeast have operated a cream yeast facility since the 1990's.

On Jan. 10, at the occasion of the grand opening of the yeast drying facility, Leaf – Lesaffre Advanced Fermentations announced the launch of its new bioengineered yeast, ER-Xpress, a robust enzyme expressing yeast specifically developed for the U.S. bioethanol industry. This new strain will be produced and dried in the new facility.

"Lesaffre is pleased to invest and extend its industrial yeast manufacturing network in the USA. This new yeast drying capacity will enable us to continue to develop tailored products and to address our white biotech customers' development strategies," Baule said. (ethanolproducer.com 11 January 2017)

Toray and Mitsui Sugar explore production cellulosic sugar from surplus bagasse via membrane technology

The Japanese companies, Toray Industries, Inc. and Mitsui Sugar Co., Ltd. have announced the launch of a new joint venture based in Thailand called Cellulosic Biomass bagasseTechnology Co., Ltd., aimed at developing a bioprocess using membranes to produce cellulosic sugar. The process, combining Toray's water treatment membrane with bio technologies, would enable the production of a high quality, low cost cellulosic sugar from inedible biomass while saving 50% energy in manufacturing.

Thailand is one of the foremost producers of sugarcane in the world and is the largest exporter of sugar in Asia. It has been promoting biomass-based businesses as well as research and technology development and is suitable for pursuing the demonstration project.

The new joint venture, in which Toray Group holds a 67% stake while Mitsui Sugar owns the remaining 33% stake, will build a demonstration plant with a capacity to handle 15t of bagasse per day (dry weight), yielding some 4.2t of cellulosic sugar after going through the processes of pretreatment, enzymatic saccharification, and membrane separation. The pilot plant will employ concentration technology that uses Toray's water treatment membranes to produce high quality cellulosic sugar while conserving energy.

Cellulosic sugar, obtained by the hydrolysis of cellulose contained in inedible biomass, can be used as a raw material for producing a host of biochemical products, including ethanol, lactic acid and succinic acid. The JV envisages the creation of a new supply chain from surplus bagasse to biochemical products.

In addition to cellulosic sugar, the plant will manufacture polyphenol and oligosaccharide, which can be made into livestock feed, using the same raw material and process, to increase the economic benefit of using bagasse. Commercialization will be pursued through the demonstration project.

As part of the endeavour, Toray will actively pursue open innovation between different industries related to bioconversion technology using membranes and drive forward the development of supply chain and provisioning of solutions.
(bioplasticsmagazine.com 11 January 2017)

Two-thirds of Europeans want more biofuels

A large majority of Europeans want biofuels production and use to grow, according to the German Bioethanol Industry Association.

A recent Europe-wide opinion poll found that 69% of consumers surveyed in the 28 EU member states are in favor of increased use of biofuels, with only 15% opposed and 16% with no opinion on the matter.

Responses from more than 11 000 participants were analyzed in the poll commissioned by the European Renewable Ethanol Association. In Germany, the majority of poll participants (61%) supports the use of biofuels; 23% are opposed and 16% have no opinion. In France, 73% of consumers are in favor of biofuels, 13% are against and 14% of respondents have no view.

Dietrich Klein, secretary general of German Bioethanol Industry Association, said France's stronger pro-biofuels attitude, compared with Germany, reflects an information shortfall in the latter country. "The results of the survey show that consumers in France are better informed than consumers in Germany about the positive contribution bioethanol makes to combatting climate change," he said. "German consumers do not realize how much bioethanol reduces carbon dioxide emissions."

Klein added that a government study in Germany found that the aggregate effect of ethanol-blended fuel use in the country reduced greenhouse gas emissions by 70% in 2015. "Consumers are not aware either that this enabled total savings of 1.8 mio t of climate-damaging CO2 emissions in the transport sector," he said, pointing out that the information shortfall has a pronounced negative impact on climate protection. "The marketshare of Super E10, which is by far the most environmentally friendly and climate-friendly fuel, is currently 12.6% in Germany, which is considerably lower than the 40% share it has achieved in France. By adopting Super E10 as the standard petrol type, along with Super Plus, an additional 1.2 mio t of CO2 emissions could have been avoided in the transport sector in 2015."
(ethanolproducer.com 27 February 2017)

Ethanol brings USD 2 bio per year to Minnesota's economy

The ethanol industry continued to boost Minnesota's economy in 2016, contributing USD 1.98 bio to the state's gross domestic product (GDP). A new study released by ABF Economics, which was commissioned by the Minnesota Bio-Fuels Association, said Minnesota's ethanol industry produced 1.18 bio gallons of ethanol last year. This in turn generated USD 6.67 bio in gross sales for Minnesota businesses and supported nearly 18 000 jobs in 2016. "Minnesota's ethanol industry remains a significant contributor to the state's economy and supports thousands of jobs in both rural and urban parts of the state," said Tim Rudnicki, executive director of the Minnesota Bio-Fuels Association. ABF Economics said Minnesota's ethanol industry generated nearly USD 1.5 bio in household income and paid USD 80 mio to state and local taxes in 2016. "Spending associated with

renewable fuels production stimulates aggregate demand, supports the creation of new jobs, generates additional household income, and provides tax revenue for state and local governments. "ABF estimated the impact of the ethanol industry on the Minnesota economy by applying expenditures by the relevant supplying industry to the appropriate final demand multipliers for value added output, earnings and employment," said John Urbanchuk, managing partner at ABF Economics.

The ethanol industry's GDP contribution was largely driven by the production of ethanol and its co-products, research and development, corn production as well as plant expansions/renovations and the installation of new E15 and E85 stations in 2016. According to the study, the ethanol industry used 410 mio bushels of corn (26% of Minnesota's 2016 corn crop) to produce 1.18 bio gallons of ethanol, 3.5 mio t of dried distillers grains with solubles (DDGS) and 244 mio pounds of corn oil. It said the 3.5 mio t of DDGS produced was sufficient to meet the annual feed requirements of over 2.5 mio beef and dairy cattle, or the entire inventory of cattle and calves in Minnesota. As for corn oil, the study said the 244 mio pounds produced could produce 33.5 mio gallons of biodiesel, which is over 26% of Minnesota's biodiesel capacity. Apart from jobs at ethanol plants, the ethanol industry supported jobs in agriculture, construction as well as input and component suppliers in 2016. This, in turn, impacted jobs in industries such as healthcare, food and beverage, accounting, banking and finance and retail.
(ethanolproducer.com 27 February 2017)

Propel Fuels serves largest US E85 market in California

Propel Fuels, the nation's leading retailer of E85 Flex Fuel, welcomed the 2017 National Ethanol Conference to California, America's largest E85 market. Having cracked the code to high volume E85 sales, Propel sells more than 500% above the national average through innovation in fuel brand and consumer engagement.

"Over the past decade, Propel has demonstrated strong and growing demand, and we're confident E85 can be a huge national success story if the ethanol industry focuses on scaling up winning strategies," said Rob Elam, CEO of Propel Fuels. "E85 is America's fuel, with benefits the vast majority of Americans support including great value, high performance, domestic jobs and clean air."

Brand powered and data driven, Propel utilizes the most effective modern retail techniques to engage consumers with a compelling alternative to fossil fuels. With customer loyalty exceeding even Starbucks Coffee, Propel's retail brand significantly outperforms major oil brands including Chevron and Shell, and has earned the company a 70% share of the E85 market in California, one of the largest and most dynamic consumer fuel markets in the world. Propel's retail customers are valued over 10X lifetime value compared to fossil fuel customers of major branded retail.

Propel's innovation in customer experience, mobile communication and retail technology is connecting with consumers. Millennials are Propel's fastest growth segment, and the

company's mobile app has an extremely high utilization rate with over half its customers using it every month.

"The ethanol industry needs to rapidly improve downstream customer engagement. Gasoline is a long-term monopoly product. E85 is not gasoline and can't be sold the same way. The industry keeps believing the 'build it and they will come' myth, resulting in poor performance at retail and underinvestment in the long term," Elam continued. "Unbranded and unsupported E85 is not a viable retail growth product, in part, because it doesn't have a branded counterpart in most markets. These are basic retail and product brand marketing issues that most E85 retailers haven't been able to figure out."

This is a critical time for E85. Facing unfriendly EPA appointments and emboldened fossil fuel corporate lobby pressures against the Renewable Fuels Standard (RFS) on one side, and highly speculative Electric Vehicle (EV) and hydrogen hype technologies on the other, the ethanol industry needs to scale E85 infrastructure successfully in the near term. FFV availability is a foundational component to fuel choice for average consumers. With 21 mio FFVs in the U.S., as compared to 500 000 EVs, E85 is the only current alternative fuel vehicle technology that is affordable and scalable today. Low carbon liquid fuels are responsible for 85% of the greenhouse gas reductions achieved by the California's Low Carbon Fuel Standard (LCFS). Without FFVs, emissions and carbon reduction targets will not be met.

E85 margins are projected to remain robust in California. It is estimated fossil fuel corporations spent over USD 542 mio on LCFS compliance in 2016 alone. With LCFS and Cap and Trade compliance curves rapidly steepening to 2030 and beyond, California will remain a market of high value customers.
(ethanolproducer.com 23 February 2017)

Dinneen: U.S. ethanol industry strong, profitable

With a fourth straight year of record profitability for the U.S. ethanol industry in 2016, the outlook for domestic ethanol production remains strong, Renewable Fuels Association President and CEO Bob Dinneen declared today during his annual state-of-the-industry address at the National Ethanol Conference in San Diego. Addressing more than 1 000 attendees, he touted the ethanol industry's ability to navigate any market or policy challenges that lay ahead.

Last year was "a record year for production, a record year for net exports, a record year for domestic demand, and a record year for E15 sales and infrastructure build-out. It was, in short, a pretty darn good year," said Dinneen. "Thus, I can once again say with great confidence and respect for what you have been able to accomplish that the state of the U.S. ethanol industry is strong, poised for continued growth, steeled for the challenges we know will persist, but resolute in our commitment to consumers seeking relief and choice at the pump, farmers in need of value-added markets for their commodities, and Americans all across the country concerned about the air we breathe and the national security threat posed by our stubborn dependence on imported energy."

In 2016, 200 ethanol plants across 28 states—including six in California—produced a record 15.3 bio gallons of clean-burning, high-octane ethanol, while supporting 74 420 direct jobs and 264 756 indirect and induced jobs across the country. Meantime, so far this year, the U.S. ethanol industry is producing at an annualized rate of 16.1 bio gallons, meaning a fifth straight year of growth, Dinneen touted.

Not resting on its laurels, the U.S. ethanol industry is focused on future growth, Dinneen told attendees. "We must expand existing markets and open new markets for ethanol here and abroad," he said. "We must continue adding value to our plants and pursuing technologies that will make us more efficient and profitable."

Echoing the theme of this year's conference—"Building Partnerships, Growing Markets"—Dinneen continued, "Of course, we will be doing this with a new President, new leadership throughout the government, and a political climate less than welcoming to expanded corn ethanol. Success will depend on our ability to build partnerships with new allies and a coalition reflecting today's political reality."

The ethanol industry already has a strong base of support, both in Congress and from President Trump, who spoke favorably about ethanol and the Renewable Fuel Standard throughout the campaign. "President Trump's support for ethanol and the RFS is unwavering," Dinneen said.

The RFA also anticipates the Trump administration will stand up for American trade, and fight back against any trade distorting tariffs, such as those recently imposed by the Chinese on U.S. ethanol and dried distillers grains exports.

Domestically, the ethanol industry will focus on building demand, including growing the marketplace for E15, Dinneen told attendees. Major marketers like Thornton's, Kum & Go, Sheetz and RaceTrac already offer the fuel blend, but the industry is being hamstrung by EPA's "nonsensical disparate treatment of E10 and E15 with regard to volatility regulations." One of RFA's top priorities will be to secure RVP parity for all ethanol blends, Dinneen said.

The future for the U.S. ethanol industry is bright, but will ultimately be successful if new partnerships are built and the new partnerships and remain united. "I am committed to presenting a united and unbreakable front so there is no ambiguity as to where the entire ethanol industry stands. And I am confident others share my commitment and will work with us toward a common purpose—growing demand and making this industry the success it must be if we are to achieve the energy, environmental, rural economic, and consumer goals that define our mission," Dinneen concluded.
(ethanolproducer.com 21 February 2017)

Iowa ethanol plant boosts capacity with new technology

Pine Lake Corn Processors has become the first ethanol plant in Iowa to install Whitefox's Integrated Cartridge Efficiency (ICE) membrane solution to increase production capacity and improve overall plant efficiency. Pine Lake, located at Steamboat Rock, Iowa, operates at 35

MMgy dry mill ethanol plant. Whitefox's bolt-on ICE solution gives the plant an additional 10% ethanol capacity by removing process bottlenecks.

Pine Lake CEO James Broghammer said the impact of the Whitefox technology became evident almost immediately. "Overall I see a better performing plant with increased capacity and lower steam consumption per gallon of ethanol produced just by eliminating the mole sieve recycle stream to the rectifier," he said.

After two months of operating the system, Pine Lake has decided to expand its Whitefox ICE unit by a third. The modularity of a Whitefox ICE solution makes this straight forward, and the additional expansion is expected to come on line in the second half of 2017.

Gillian Harrison, CEO of Whitefox, said, "We are proud to deliver the first Whitefox ICE solution in Iowa to Pine Lake Corn Processors. James Broghammer and his team have been key to ensuring the successful execution of the project and we have been impressed with his insight and hands-on approach.

We look forward to delivering the next phase of the expansion later in the year. Pine Lake has taken a lead in showing how plants can get more from their existing infrastructure and improve the profitability of every gallon of ethanol. This project shows how important rural America is in efficiently producing low- carbon renewable fuels."
(ethanolproducer.com 21 February 2017)

Greenyug signs offtake agreement for ethyl acetate

HELM AG and Greenyug LLC announced an off-take agreement for the purchase and sale of bio-based ethyl acetate produced at Greenyug's planned ethyl acetate facility in Columbus, Nebraska. Greenyug has formed a subsidiary, Prairie Catalytic LLC, that will own and operate the production facility.

This agreement will make significant amounts of bio-based ethyl acetate available first time to the market. The Prairie Catalytic production facility will be located next to Archer Daniels Midland Company's corn processing plant in Columbus, Nebraska. The ADM facility in Columbus will supply the project with bioethanol feedstock and other services. Construction of the facility is anticipated to start during 2017 with production set to begin about a year later. Greenyug and HELM are pleased to announce that HELM will take over exclusive responsibility for the worldwide sales and marketing of ethyl acetate from the Prairie Catalytic facility.

Axel Viering, executive director of the derivatives business unit at HELM, highlighted the relevance of the marketing contract with Prairie Catalytic and its parent Greenyug: "By entering into this marketing agreement we are further strengthening our global presence and expanding our existing competence in ethyl acetate distribution. As a major global distributor of chemicals, HELM looks forward to a long-term relationship with Greenyug and Prairie Catalytic."

"The collaboration with HELM clearly fulfills our project needs of a major marketer, and we are impressed with HELM's secure network in relevant markets worldwide. This off-take agreement provides us immediate access to ethyl acetate customers enabling Prairie Catalytic to generate revenue once the plant is operational," stated Sagar Gadewar, Greenyug and Prairie Catalytic, CEO.

Greenyug developed its patented technology at its Santa Barbara, California, Research Facility and continued the scale-up at its fully integrated demonstration plant in India. Greenyug has developed a proprietary platform to add value to bioethanol by upgrading it into a variety of bio-based chemicals with broad market appeal. Greenyug Ethyl Acetate, the first of such products, is a widely marketed specialty solvent used extensively in products such as paints, coatings, pharmaceuticals, adhesives and a variety of consumer goods. Ethyl acetate has a global market of more than USD 4 bio. The market for ethyl acetate is growing faster than GDP because of its desirable properties. Greenyug Ethyl Acetate will be the first commercially available in industrial quantities to be entirely sourced from renewable feedstock. (ethanolproducer.com 21 February 2017)

Ace Ethanol to install D3MAX cellulosic ethanol pilot plant

D3MAX has announced the completion and shipment of its pilot plant employing the patented D3MAX cellulosic ethanol technology. The pilot facility will be installed at ACE Ethanol LLC, in Stanley, Wisconsin, in late February. Installation is expected to be complete by mid-March with startup and testing at the facility taking place over the ensuing two months.

"We are very excited to take this next step in developing the D3MAX technology," says Mark Yancey, chief technology officer for D3MAX. "ACE (Ethanol LLC) has been an excellent partner in the lead up to the installation and running of the pilot facility."

"We see this type of bolt-on technology as a clear path forward for cellulosic ethanol," says Neal Kemmet, president and general manager at ACE Ethanol. "Of course, much will be determined during the next phase of pilot testing. However, if successful, we feel the D3MAX process will be key in allowing current producers to lead the way for the next generation of ethanol production."

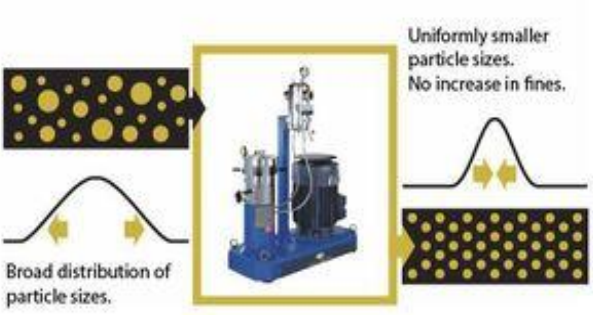
Operation of the skid-mounted unit, constructed by Ohio-based AdvanceBio Systems, will help narrow the operating parameter such as pretreatment time, temperature, pH, etc. Upon successful completion of pilot testing and data collection, D3MAX intends to complete the full detailed commercial design and license the technology across the United States and Canada. (ethanolproducer.com 16 February 2017)

Pacific Ethanol to install Edeniq technology at Madera plant

Pacific Ethanol Inc. a California producer and marketer of low-carbon renewable fuels, and Edeniq Inc., a biorefining and cellulosic technology company, announced they have entered into a technology licensing and purchase agreement to enable the production of cellulosic

ethanol at Pacific Ethanol's Madera, California, plant using Edeniq's Pathway and Cellunator Technologies.

Pacific Ethanol, Inc.



The Madera plant has a total annual production capacity of 40 mio gallons, and is expected to produce up to 1 mio gallons per year of cellulosic ethanol with Edeniq's Pathway process. Installation is expected to be completed in the third quarter of 2017.

Neil Koehler, Pacific Ethanol's president and CEO, stated: "Consistent with our strategy to improve yields and increase production of advanced biofuels at our plants, we are expanding cellulosic ethanol production to our Madera facility. We began producing cellulosic ethanol using Edeniq's technology at our Stockton plant in December 2015, and the resulting bottom line contribution is significant.

Once commercial scale production is reached at Madera, we expect the technology will increase earnings by over USD 2 mio annually. We will be working with the EPA to qualify this production for generating D3 cellulosic RINs, which provide an important premium, and we expect the approval to be received near or shortly after we begin commercial operations. We are also working with the California Air Resources Board to qualify our cellulosic production at both our Stockton and Madera facilities for additional carbon credit under the California Low Carbon Fuel Standard."

Brian Thome, president and CEO of Edeniq, stated: "We are pleased to expand our relationship with Pacific Ethanol and provide our Pathway and Cellunator Technologies to its second ethanol plant. The low-cost profile of our technologies offers ethanol producers an attractive option for enhancing ethanol and corn oil yields and producing high-value cellulosic ethanol using existing fermentation and distillation equipment. We are excited to have over 2 bio gallons of ethanol capacity either already under license or committed to commercial trials for our Pathway Technology, with additional plants being added each month."

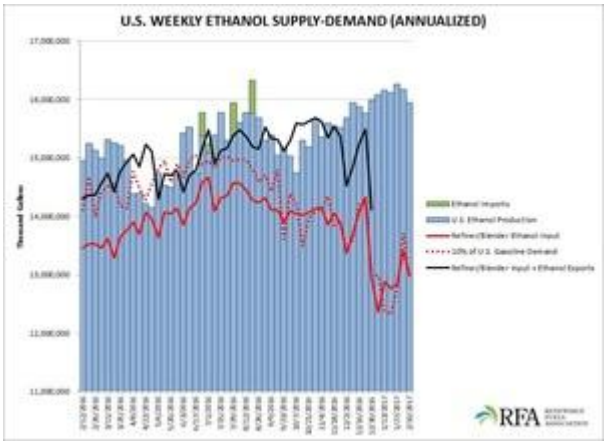
Edeniq's Pathway Technology is a low-cost solution for producing and measuring cellulosic ethanol from corn kernel fiber utilizing existing fermenters at corn ethanol plants. The

Cellunator high-shear milling equipment is a leading yield-enhancement technology that offers the most significant and consistent increase in ethanol yield and corn oil recovery, and produces cellulosic ethanol when integrated with Edeniq's Pathway Technology.

The technology features a proprietary technical validation process, quantifies the amount of cellulosic ethanol produced and complies with the registration, recordkeeping, and reporting required by the EPA to generate cellulosic D3 Renewable Identification Numbers (RINs) as defined by the Renewable Fuel Standard.
(ethanolproducer.com 16 February 2017)

U.S. ethanol production holds steady, stocks rise

According to Energy Information Administration data analyzed by the Renewable Fuels Association, ethanol production averaged 1.04 mio barrels per day (b/d)—or 43.68 mio gallons daily last week. That is down 15 000 b/d from the week before and a seven-week low. The four-week average for ethanol production dipped to 1.05 mio b/d for an annualized rate of 16.13 bio gallons.



Stocks of ethanol stood at 22.5 mio barrels. That is a 1.9% increase from last week and the highest since late March 2016. Imports of ethanol remained flat at zero b/d for the 25th week in a row.

Gasoline demand for the week averaged 354.2 mio gallons (8.43 mio barrels) daily. Refiner/blender input of ethanol averaged 847 000 b/d, meaning gasoline contained an average of 10.04% ethanol. Year-to-date, gasoline has contained an average of 10.03% ethanol. Expressed as a percentage of daily gasoline demand, daily ethanol production was 12.33%.
(ethanolproducer.com 15 February 2017)

PepsiCo turns to Danimer's compostable resins to develop innovative snacks packaging

The agreement builds on a long-standing relationship that has included the development of bio-based compostable packaging for PepsiCo's snack brands and will facilitate the expansion of Danimer Scientifics' Nodax PHA plant.

In October 2016 PepsiCo announced its 2025 sustainability agenda, which includes the intent to reduce greenhouse gas emissions across its value chain and design 100% of its packaging to be recoverable or recyclable. This goal is part of PepsiCo's decade-long Performance with Purpose initiative to deliver top-tier financial performance over the long term by integrating sustainability into its business strategy. This collaboration is also expected to help expedite PepsiCo's transition to packaging that is completely biodegradable for their snack food portfolio by incorporating Nodax™ PHA bioplastic into certain of its next-generation snacks packaging.

"From the start PepsiCo has taken a holistic approach to our sustainability work," said PepsiCo Vice Chairman and Chief Scientific Officer Dr. Mehmood Khan. "Our first objective is achieving long-term profitability and that requires sustainable solutions to grow our business while minimizing our environmental impact. Our plan to scale Danimer Scientifics' technology is a step toward achieving both our greenhouse gas emission reduction and our recoverable and recyclable packaging goals."

"Danimer Scientifics' partnership with PepsiCo marks a significant milestone as we continue to expand our biopolymer technology to provide innovative bioplastic solutions to a wider range of applications and products," said Danimer Scientific's CEO, Stephen Croskrey. "We've been developing a relationship with PepsiCo for the last seven years, and as one of the largest food and beverage companies in the world, their commitment to limiting the environmental impacts of their products can actuate real change in the way of sustainability."

Nodax PHA is a naturally occurring biopolymer produced by microbial bacteria as they ferment organically sourced oils. Produced using renewable biomass, Nodax PHA is both sustainably sourced and proven to be capable of replacing many short-term use petroleum-based plastics, for both performance and price. Traditional plastics are manufactured from chemicals obtained from mined crude oil or natural gas sources.

Danimer Scientifics' Nodax PHA received the first ever OK Marine Biodegradable certification from Vinçotte International, validating that the biopolymer safely biodegrades in salt water environments, leaving no toxins behind. Nodax PHA possesses seven Vinçotte certifications and statements of industrial and home compostability,

biodegradability in anaerobic, soil, fresh water, and marine environments, and is bio-based. All of Danimer Scientifics' biopolymers, including Nodax PHA, are FDA approved for food contact.
(bioplasticsmagazine.com 28 February 2017)

Repsol starts pilot-scale production CO2-based polycarbonate polyol

The new pilot plant is part of a project aimed at developing an innovative and pioneering process for manufacturing a polycarbonate polyol, in which part of the fossil-based propylene oxide currently used is replaced by CO2. Use of this abundant and sustainable alternative raw material can reduce the environmental footprint, considerably cutting emissions of pollutants into the atmosphere, says the Spain-based energy company. The new polyol joins a portfolio of polyols supplied by Repsol , which offer a wide range of alternatives to meet the specific needs of customers.

Repsol has worked together with selected customers who have manufactured products with this innovative polyol. Additional advantages of this new polycarbonate polyol are that, it enhances certain properties of different CASE applications. According to Repsol, the new polyol offers offer enhanced adherence and elasticity in adhesives and elastomers compared with conventional polyols. They also have specific properties, allowing them to be applied in other ways in the future.

Repsol has already started production of its polycarbonate polyol in the pilot plant located in Puertollano, Spain. The new polyol produced at this plant has a CO2 content of 20%. According to Repsol, it is "a step forward for a more ambitious project at industrial scale" and with it, the company "reinforces its commitment to innovation, sustainability and contributing to a better environment." (KL)
(bioplasticsmagazine.com 24 February 2017)

Bebo B2nature material offers sustainable option for coffee capsule

The new Bebo B2nature material features a special multilayer sheet which incorporates an effective oxygen barrier to deliver a long ambient shelf-life and maintain the aroma and quality of the coffee in the capsule. Within 12 weeks of industrial composting only a minor amount of capsule material is left thanks to efficient decomposition, which is assisted by the coffee itself, as it provides valuable nutrients to the compost and improves the nature of the soil. The material can therefore be certified for industrial composting, based on key European and US norms.



Equally important, the compostable capsule retains comparable strength and durability to one made from conventional capsule materials to ensure efficient filling and sealing, together

with reliable operation in pressurized coffee machines.

"B2nature means consumers can benefit from the convenience of small portion packs by providing a sustainable means of disposing of them," explains Matthias Michaelis, RPC Bebo's Business Unit Manager, Thermoformed Barrier Packaging.
(bioplasticsmagazine.com 23 February 2017)

Versalis and Genomatica produce bio-rubber with bio-butadiene from sugars

The success of this innovative undertaking results from a newly-developed process for the on-purpose production of butadiene which uses various types of sugars as feedstock, rather than the traditional use of hydrocarbon feedstocks. The project started with the establishment of a technology joint venture between Versalis a Milanese producer in the polymers and elastomers industry, and Genomatica, a leader in bioengineering solutions, in early 2013. The joint venture – with Versalis having the majority stake – has developed a complete process to make bio-BDE and plans to license the resulting technology.



The joint venture uses the proven and complementary strengths of both companies. Versalis and Genomatica together determined that 1,3-butanediol (1,3-BDO) was the most suitable intermediate to produce bio-BDE. Genomatica applied its 'whole-process' systems approach to bioengineering to develop a microorganism that produces 1,3-BDO in a way that enables cost-efficient, scalable fermentation, recovery and subsequent process operations. Versalis leverages its industrial process engineering and catalysis capabilities, plus expertise in overall polymer production, to purify the 1,3-BDO, dehydrate it and then purify the resulting butadiene. Versalis has produced several kilograms of butadiene from 1,3-BDO made in 200 liter fermenters at their research centers at Novara and Mantova, and then made bio-polybutadiene, at the Ravenna R&D centre, using both anionic and Ziegler-Natta catalysis. Initial testing of the bio-BDE and bio-BR demonstrates good compatibility with industry standards. Versalis is continuing to test the bio-BDE within its other proprietary rubber and plastics downstream technologies such as SBR (Styrene-Butadiene Rubber), SBS (Styrene-Butadiene-Styrene Rubber) and ABS (Acrylonitrile Butadiene-Styrene). The accomplishments demonstrate the common vision of the partners on the potential of this project: access to on-purpose butadiene from renewables will establish a competitive advantage and will ensure a strategic raw material from alternative feedstock, contributing at the same time to drive a greater sustainability profile for downstream applications in the plastics and rubber businesses.
(bioplasticsmagazine.com 17 February 2017)

Exclusive deal announced today to produce bio-based plasticizers

Green Biologics, Inc., the U.S. subsidiary of Green Biologics Ltd., a U.K. industrial biotechnology and renewable chemicals company, announced today an exclusive collaboration with Jungbunzlauer Ladenburg GmbH, the German operating unit of Jungbunzlauer Suisse AG in Basel, Switzerland. Jungbunzlauer is one of the world's leading producers of biodegradable ingredients of natural origin. The company received its first shipment of 100% renewable BioPure n-butanol from Green Biologics' production facility in Little Falls, Minnesota in February 2017. Jungbunzlauer aims to produce bio-based CITROFOL BI (tributyl citrate) and bio-based CITROFOL BII (acetyl tributyl citrate) for its customers, with commercial shipments beginning next month. Green Biologics announced the start-up of its first commercial production facility for renewable n-butanol and acetone in December 2016, with its first bulk export shipment to Jungbunzlauer in mid-January. "Our focus is to selectively move our renewable n-butanol and acetone into high value markets, and Jungbunzlauer is a superb technological and market-facing partner for Green Biologics, particularly in citric-based plasticizers, but in other bio-based esters as well," added Staub. Green Biologics is a member of the American Chemistry Council (ACC) and is building its new green solvents facility to meet Responsible Care standards. The company's n-butanol and acetone have received 100% bio-based, USDA BioPreferred status.
(bioplasticsmagazine.com 14 February 2017)

NatureWorks has finalized three-year commitment to New Plastics Economy initiative

The foundation's initiative, which was first described last year in a joint report with the World Economic Forum entitled 'The New Plastics Economy – Rethinking the Future of Plastics', brings together key stakeholders to rethink and redesign the global plastics system, starting with packaging. The chief tenants of the plan, drafted with analytical support from McKinsey & Company, call for decoupling plastics from fossil feedstocks by exploring and adopting renewably sourced feedstocks and drastically reducing leakage of plastics into natural systems, all amidst the broader context of creating an effective after-use plastics economy by improving the economics and uptake of recycling, reuse, and controlled biodegradation for appropriate targeted applications. NatureWorks has engaged with the foundation since 2015 in the development of these concepts and the report.

At the just concluded World Economic Forum Annual Meeting in Davos, a new report published under the title 'The New Plastics Economy - Catalyzing Action' provides a transition strategy for achieving the goals of the New Plastics Economy initiative. The strategy includes guidelines for new types of packaging, improved technology and processes for reuse, and innovations in material types and characteristics. The goals and strategies outlined in the new report are endorsed by more than 40 leading organizations representing the entire global plastics industry, from chemical

manufacturers to consumer goods producers, retailers, city authorities, and recyclers.

"We welcome the partnership of biopolymers producers such as NatureWorks to our New Plastics Economy initiative," said Rob Opsomer, lead for the Foundation's initiative. "We look forward to working with NatureWorks and all our participants on ways for the global plastics industry to support new materials innovation, design better packaging, increase recovery rates, and introduce new models for making better use of packaging." (bioplasticsmagazine.com 02 February 2017)

Stora Enso's new biocomposite granules to offer sustainable alternative to plastics

Stora Enso is investing EUR 12 mio to build a new production line that will manufacture biocomposite granules at Hylte Mill in Sweden.

Biocomposite granules enable the use of renewable wood to substitute a large portion of the fossil-based materials in products typically produced in plastics. Production is scheduled to begin during the first quarter of 2018. The annual capacity will be approximately 15kt per year. The ramp-up of the new production line and a new type of manufacturing is expected to take 2–3 years.

"This investment is part of Stora Enso's transformation into a renewable materials company and demonstrates our ability to provide an innovative and more sustainable alternative to plastics. With this new biocomposite production line, we are well positioned to capture growth opportunities in climate and environmental friendly materials," says Jari Suominen, EVP, Head of Stora Enso's Wood Products division.

At Hylte Mill, Stora Enso can make best use of the resources available: an industrial infrastructure, the local supply of raw material and a highly competent workforce. The estimated total employment impact for Hylte is 20 FTE's.

Once finalised, the investment will increase Stora Enso's Wood Products sales by approximately EUR 25 mio and will exceed the division's profitability target, operational return on operating capital (ROOC) of 18%. The biocomposite business will belong to the Wood Products division.

Biocomposite granules are a mix of wood fibres, polymers and additives and are used as raw material for injection moulding and the extrusion of products traditionally manufactured solely from plastic. The material can be used in a wide range of products from consumer goods (dish brushes, pots, etc.) to industrial applications, such as pallets or load bearing structures reinforced by glass fibre. (bioplasticsmagazine.com 20 January 2017)

These are the news derived from regional publications, translated using online tools, hence the medium quality of translation.

China

Origin, Arcadia announce China biotechnology collaboration in corn

Origin (Origin Agritech, LLC), an agricultural biotechnology trait and seed provider, and Arcadia (Arcadia Biosciences, Inc.), a California-based company that develops and commercializes agricultural productivity traits and nutritional products, today announced their collaboration to achieve the first-ever export of a key corn biotechnology product developed in China to the United States for completion of global regulatory trials.

The successful movement of this corn seed , containing an insect resistance/herbicide tolerance trait discovered and developed in China, to the Arcadia greenhouse represents a key milestone in Origin's strategic business plan to achieve global regulatory approvals for cultivation and international grain movement.

"This first-of-its-kind export validates Origin's leading position in China biotech and its close alignment with Chinese ministries leading the transformation of the domestic seed industry. Combining Origin's robust pipeline of value-added Chinese traits and elite corn germplasm with Arcadia's research and development infrastructure demonstrates our plan to capture a sizeable piece of China's estimated billion-dollar corn seed trait market," said Bill Niebur, Origin chief executive officer.

Arcadia and Origin signed an agreement under which Arcadia will assist Origin in developing information for submission to regulatory authorities in the U.S., China and other countries for the approval of their traits in corn. This project involves production of inbred and hybrid seed lines under quarantine conditions in Arcadia greenhouses.

Origin's investment and focus aligns tightly with China's 13th Five Year Plan, which calls for the modernization of agriculture as the foundation for building a prosperous society. The Chinese government, including the Ministry of Agriculture (MOA) and Chinese Academy of Agricultural Sciences (CAAS), has advanced a policy vision to facilitate seed industry innovation, improve the competitiveness of the Chinese ag tech industry and cultivate new seed varieties for farmers around the world. Through these actions, China has shown strong commitment to advancing its ag industry through new advances in biotechnology. Origin anticipates China commercialization of corn biotechnology at the end of this decade
(news.agropages.com 23 February 2017)

Chinese ethanol imports to tumble by two-thirds, as production rises

Chinese fuel ethanol imports will plummet by nearly two-third in 2017, thanks to trade restrictions and rising domestic production, US officials said. The US Department of Agriculture's Beijing bureau saw 2017 imports of bioethanol, ethanol produced from organic matter for use as road fuel, at just 300 mio litres, down from 853 mio litres a year earlier. The outlook follows a series of increases to Chinese

duties on US imported ethanol, and an ongoing drive to increase domestic ethanol use.

Rising domestic production

The bureau forecast 2017 fuel ethanol production at a record 3 550 mio litres, up 12.6% year on year, citing "strong demand, plentiful feedstocks, and continued government support." "Policy changes have reversed the fortune of China's ethanol producers, driving production higher," the bureau said.China's latest five year plant targets ethanol production at 6 335 mio liters by 2020. Most of China's ethanol production is based on corn, of which the country has very large stocks. Consumption in 2017 is seen as largely unchanged year-on-year, at 3 849 mio litres.

US out of the market

In 2016 almost all Chinese ethanol imports came from the US, but this picture will change in 2017, thanks to a package of measures including higher tariffs, as well as special anti-dumping and anti-subsidy duties on major American producers. This month Todd Becker, chief executive of US ethanol group Green Plains, told investors that the company outlook was based on "zero" US exports to China this year. ADM boss Juan Luciano this month told investors that US exports to China in 2017 were "questionable."

(agimoney.com 14 February 2017)

USGC, RFA, Growth Energy urge action on China trade tariffs

In a letter to President Donald Trump this week, the U.S. Grains Council, Renewable Fuels Association and Growth Energy are asking for help "in urgently addressing China's recent implementation of protectionist trade barriers that are shutting out U.S. exports of ethanol and distillers dried grains (DDGS)." Specifically, the three groups are asking the incoming U.S. trade representative to put China's recent actions near the top of the administration's China trade agenda.

In September 2016, after a nine-month investigation, China imposed a preliminary anti-dumping duty of 33.8% against U.S. DDGS and a countervailing duty of 10 – 10.7%. In a final ruling last month, China increased its DDGS anti-dumping duty to 42.2 – 53.7% and its DDGS countervailing duty to 11.2 – 12%. Additionally, the tariffs on U.S. ethanol have increased from 5% to 30 – 40%.

China has grown to be a top export market for U.S. DDGS. In 2015, the country imported 6.5 mio t of the ethanol coproduct, worth USD 1.6 bio and accounting for 51% of total U.S. DDGS exports. By the end of 2016, China had become the U.S. ethanol industry's third-largest export market, receiving nearly 20% of total exports. Nearly 200 mio gallons of ethanol worth more than USD 300 mio were shipped to China last year.

As the letter explained, China's recent actions have contributed to lower prices for ethanol and DDGS. Ethanol prices have fallen 15% since mid-December 2016 while DDGS prices have fallen steadily since the summer of 2016. DDGS prices are currently approximately 40% lower than in June 2016.

"President Trump's message of 'America First' with regard to trade policy resonated with the

U.S. ethanol industry and farmers across the country," said RFA President and CEO Bob Dinneen. "China's growing demand for protein and renewable fuel has triggered significant investment to meet their needs. The sudden and unnecessary reversal in China's trade policy, and the barriers to U.S. imports they have imposed, have jeopardized our industry and penalized Chinese consumers. They need to end. We look forward to working with the president and his administration to restore free and fair trade to the betterment of both."
(ethanolproducer.com 08 February 2017)

China takes action against US DDGS, ethanol imports

On Jan. 11, China's Ministry of Commerce announced it will subject U.S. distillers grains with solubles (DDGS) to anti-dumping and countervailing duties. According to information released by the ministry, the duties will be levied beginning Jan. 12. Documents published by the Chinese government indicate the country's DDGS industry requested an anti-dumping and countervailing investigation in late 2015. The investigation began in January 2016. A preliminary ruling was made in September.

In a statement, U.S. Grains Council President and CEO Tom Sleight said China's announcement "is the latest in a rash of measures taken by the Chinese government to restrict access to that market for U.S. feed grains and related products, specifically corn, distillers dried grains (DDGS) and ethanol."

Sleight noted the DDGS announcement came only 10 days after China to action to dramatically increase tariffs on imported U.S. ethanol from 5 to 30%, effectively stopping a growth market for U.S. farmers and ethanol producers. Sleight noted U.S. farmers also continue to wait for China's approvals of biotech corn events, which last happened in 2014.

"The decisions in the anti-dumping and countervailing duties investigations are not supported by the evidence and raise serious questions regarding the ministry's compliance with standard AD/CVD procedures and with China's international obligations," he said. "While painful and damaging to the U.S. DDGS industry, their biggest negative impact will ultimately be on China's feed and livestock industries, which risk losing access to an important and cost-effective feed ingredient, and on millions of Chinese households that will likely face greater food price inflation and less access to affordable, wholesome pork, poultry and dairy products."

A statement released by Marquis Energy, an ethanol producer based in Hennepin, Illinois, states Chinese tariffs on ethanol and DDGS are expected to cost U.S. agriculture at least USD 2 bio per year. "These tariffs are the poster child of bad trade deals," said Mark Marquis, CEO of Marquis Energy. "It is our opinion that the Chinese calculations are not in line with WTO trade rules."

Marquis Energy said it, along with U.S. farmers, are hopeful the new Trump administration will immediately take up the issue of these tariffs directly with China, rather than waiting several

years that a WTO challenge would take whole the tariffs remain in place, harming U.S. trade.

According to the U.S. Energy Information Administration, the U.S. exported nearly 1.76 mio barrels of ethanol to China in 2015, or an average of 5 000 barrels per day. In 2014, the U.S. imported only 81 000 barrels of ethanol to China, down slightly from the 86 000 barrels exported to China in 2013. During the first 10 months of 2016, the U.S. exported nearly 3.8 mio barrels of ethanol to China.

USGC data shows 3.37 mio t of DDGS were exported to China during the 2015-'16 marketing year, down from 5.37 mio t during the 2014-'15 marketing year and 6.18 mio t during the 2013-'14 marketing year.
(ethanolproducer.com 11 January 2017)

Uganda

How Kakira Factory Is Turning Sugarcane Waste Into Fuel

Clustered under a watch-like tower that stands out like a giant phoenix in the sprawling sugarcane fields are giant distillation tubes. Save for the distant hum from the nearby Sugar factory, it is silent here, which gives a deceptive impression of inactivity. Inside the glimmering tubes the process of turning molasses, a residue from the sugar milling process, into ethanol is underway at a USD 36.6 mio (Shs 130 bio) distillery that came into production at the end of November last year.

The molasses are first pumped into a tank from where they undergo a fermentation process. The fermented mash is then pumped into distillation columns for heating, a process which results in the production of raw industrial alcohol. The alcohol is then taken through a process of dehydration, which involves the removal of as much water and impurities as possible, leaving only ethanol suitable for use as a substance called biofuel.

Biofuel, simply speaking, is a fuel derived directly from living matter. In this case the living matter is sugar cane (remember that plants are living things too?).

Biofuels differ from fossil fuels like coal and petrol because fossil fuels are derived from remains of living organisms that died thousands or millions of years ago.

The biofuel produced at the plant in question is mainly for blending with petrol. However, the same industrial alcohol could be subjected to a rectification process which leads to the production of Extra Neutral Alcohol (ENA) or potable alcohol for use in the beverages industry, and as a sanitizer in hospitals.

During the distillation process, off-specification ethanol that does not meet quality standards of either fuel grade anhydrous ethanol or ENA, is produced and stored separately. This alcohol will be 'denatured' to protect users against consumption and used as cooking fuel in ethanol clean cook-stoves.
(allafrica.com 23 February 2017)

Thailand

The real cost of Thailand scrapping its sugar subsidy program

The Thai government has announced that it will end its programme subsidising its sugar industry nearly a year after Brazil said that the programme dragged down global sugar price. The Southeast Asian nation will stop its subsidy on sugar production and drop domestic control of consumer prices for sugar by the end of this year.

The loss of subsidies could cut some sugar farmers from the industry, particularly in rural areas, according to Ben Richardson, an associate professor in international political economy and author of Sugar, a book about the global sugar industry.

"When additional payments to cane farmers are cut this can lead to consolidation, as those who are less competitive at the prevailing market price are squeezed out [of] the industry," he said. "To the extent that a subsidy lowers the cost of sugar exports, this benefits importers and harms rival exporters. This is why Brazilian producers filed the case against Thailand, influenced no doubt by the domestic economic difficulties that they have been experiencing."

Paul Chambers, a lecturer of international relations at the Institute of Southeast Asian Affairs in Chiang Mai, said that the removal of the subsidy could hurt Thailand, which is the world's second largest sugar producer after Brazil. "The result could be lower Thai sugar prices, though the Thai sugar industry could be left behind by that of Brazil," he said. "The result could be a new downturn for the Thai economy and a changed global focus in sugar toward Brazil and other sugar producers. The Thai military regime, which is overseeing economic policy, could ultimately lose support because of the economic slowdown."
(sea-globe.com 23 February 2017)

Mexico

Mexico's sugar tax leads to fall in consumption for second year running

Mexico's sugar tax appears to be having a significant impact for the second year running in changing the habits of a nation famous for its love of Coca-Cola, and will encourage countries troubled by obesity and contemplating a tax of their own.

An analysis of sugary-drink purchases, carried out by academics in Mexico and the United States, has found that the 5.5% drop in the first year after the tax was introduced was followed by a 9.7% decline in the second year, averaging 7.6% over the two-year period.
(sucrosenews.com 23 February 2017)

Mexico sugar dumping harming U.S. sugar industry, economist says

Despite projections by the U.S. International Trade Commission (ITC) that subsidized imports of sugar would in turn result in lower prices for consumers, an economist recently told the ITC that the exact opposite has occurred, bringing higher prices for consumers, more profits for food manufacturers and greatly impacting the nation's sugar industry. An article on the American Sugar Alliance's (ASA)

website said American sugar producers lost USD 2 bio in 2013 and 2014 as a result of Mexico's sugar dumping, and Hawaii will no longer produce sugar after nearly two centuries of high-yield production.
(sucrosenews.com 22 February 2017)

India

Sugar weakens on higher supply, weak demand

Sugar prices declined by INR 40 per quintal at the wholesale market in the national capital today following constant arrivals amid muted demand. Marketmen said besides increased supplies from mills, limited off-take by stockists and bulk consumers in view of approaching month-end mainly resulted fall in sweetener prices.

Sugar mill delivery M-30 and S-30 prices dropped by INR 40 each to end at INR 3 680-3 810 and INR 3 670-3 800 per quintal. In the millgate section, sugar Chandpur fell by INR 40 to INR 3 680, while Mawana, Dhanora, Khatuli, Dhampur and Sakoti slipped by INR 30 each to INR 3 710, INR 3 720, INR 3 760, INR 3 680 and INR 3 700 per quintal. Following are today's quotations (in INR per quintal) Sugar retail markets – INR 45.00-50.00 per kg.
(sucrosenews.com 27 February 2017)

Sugar output might fall 10% short of government's estimates

Sugar output might fall short of government's estimates by 10% even as the crushing season in Maharashtra draws to a close. According to Central Government's projections, sugar production is anticipated to be 22.5 mio t for 2016-17, but according to the sugar industry actual production could be 20 mio t only.

According to State Government's statistics on February 20, sugar mills in Maharashtra have produced 4056kt of sugar compared to 6562kt produced during the corresponding period of the previous year.
(sucrosenews.com 22 February 2017)

India needs 1.5 mio t of sugar imports in 2017

India, the world's biggest consumer of sugar, will likely need to import around 1.5 mio t of the sweetener this 2016/2017 season, the chairman of one of the country's sugar trade associations told Reuters on Monday. "The timing of the imports will be settled by the government but I personally feel that around 1.5 mio t is enough," Praful Vithalani, the chairman of the All India Sugar Trade Association, said in an interview on the sidelines of the Dubai Sugar Conference.

Vithalani said the government could likely make a decision on imports by March but no later than April 15. By that time, Vithalani expects the government to have a clearer forecast for production and consumption figures.
(sucrosenews.com 13 February 2017)

New Product Developments with Starch and Derivative Ingredients



Yoplait Dippers

Company: General Mills
General Mills recently released Yoplait Dippers. A fun way to snack, this new product from Yoplait combines nonfat Greek yogurt with crunchy dippers, all wrapped up in one convenient package with no spoon required

Ingredients: Vanilla Bean Nonfat Yogurt: Pasteurized Grade A Nonfat Milk, Flavor Blend (water, sugar, corn starch, locust bean gum, vanilla bean powder, vitamin A acetate, vitamin D3), Potassium Sorbate Added to Maintain Freshness, Yogurt Cultures (L. bulgaricus, S. thermophilus), Natural Flavor.

Honey Oat Crisps: Whole Grain Oats, Sugar, Bleached Wheat Flour, Tapioca Syrup, Canola Oil, Butter. Contains 2% or less of: Honey, Egg Whites, Baking Soda, Salt, Vanilla Extract, Rosemary Extract to Preserve Freshness.



Coconut Crunch Roasted Cashews

Company: Karma Nuts Inc.
Extra crunchy with a hint of sweetness and real coconut flakes, our KARMA Coconut Crunch Roasted Cashews are tasty and full of nutrition.

Ingredients: Cashews, Natural Cane Sugar, Maltodextrin, Coconut Flakes, Sea Salt