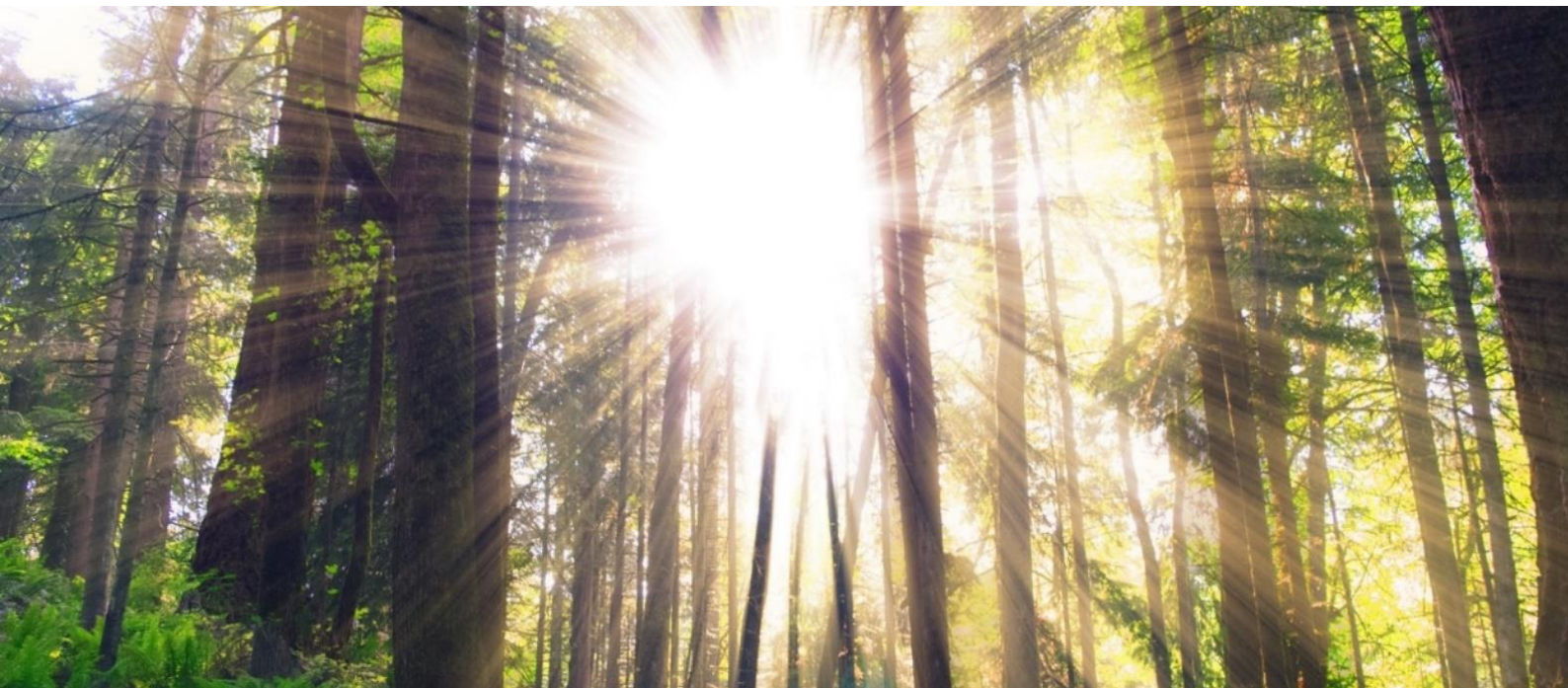


News Review



Issue Seventy-Six

July 2018

Each month we review the latest news and select key announcements and commentary on feedstocks used in the bioeconomy.

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Foreword

Welcome to July's Feedstocks News Review.

We begin on a controversial issue: palm oil. Few bioeconomy feedstocks have caused as much debate, with said debate centred firmly on palm oil's impact on biodiversity in the parts of the world where it is grown. Much has been made of the fact that oil palm is typically associated with rainforest deforestation, and the associated threat to biodiversity. However, a report by the International Union for Conservation of Nature (IUCN) has introduced an alternative perspective. The report concludes that banning palm oil would most likely increase the production of other oil crops to meet demand for oil, displacing rather than halting any significant global biodiversity losses caused by palm oil.

Part of the appeal of palm oil is the fact that its yield is so great relative to the amount of crop area required. Other oil crops may require up to nine times as much land to produce an equivalent oil yield. Thus, the IUCN argues, a phase out of palm oil would not mitigate the associated biodiversity loss, as the oil palm would simply be replaced by a "worse" crop, and even greater deforestation could occur, for example expansion of soybean production in South America. This report will no doubt resonate in the ongoing debate around the EU banning palm oils as feedstock for use in biofuel production, which has angered palm-oil producing countries, such as Indonesia, and the pressure will now be on the EU to find sustainable alternative feedstocks.

Elsewhere, another debate that won't be going away any time soon is the land-use debate, wherein the impact of growing industrial crops on available cropland for food is heavily scrutinised. One potential solution that is oft touted is better use of marginal land: land that is not deemed suitable for agriculture. More productive use of the land could be made by growing biomass crops, that as such would not impact on food production. A significant effort is due to be made to investigate the potential of this possible approach. The MAGIC project has been running for a year, and seeks to develop industrial crops that can be successfully grown and harvested on marginal land. We will watch the project's progress with interest, as any significant findings could be a huge boon for the energy crop sector, especially since there may well be over 1 million available hectares of marginal land in Europe alone.

Read on for the latest news.

Policy

EU enforces new waste recycling targets



Geograph

Local authorities and municipalities across the European Union (EU), including in the UK, need to 'get ready' to introduce separate food waste collections, according to the heads of the global and UK food waste recycling associations.

The EU has published in its Official Journal its Circular Economy Package, which includes new targets of 65% recycling of municipal waste by 2035 and separate biowaste collections by December 2023. The package will be binding on EU Member States from 4th July 2018, after which they will have two years to transcribe it into their own national laws.

Local authorities and municipalities across Europe now need to get ready to bring in food waste collections ahead of the legal deadline of December 2023.

December 2023 is just over five years away, so local authorities in England need to start factoring the requirement for separate food waste

collections into their plans and use contract renewals as an opportunity to introduce collections at the lowest possible cost and with maximum effectiveness.

Inedible food waste can be recycled through AD into biogas (which can be used to generate renewable heat and electricity and as a clean transport fuel) and digestate, which can be applied directly to land as a nutrient-rich biofertiliser.

Click [here](#) for more information.

ISCC certificate fraud

In its recent news circular (July 2018), ISCC (International Sustainability and Carbon certification) indicated that it has received information about non-certified companies that are using the ISCC certificates of certified companies in order to sell their material as sustainable. In those cases, the company name and address differ from the one stated on the certificate. The company, that is fraudulently trying to sell its material as ISCC certified, claims, that they are selling the material in the name/on behalf of the certified company.

It is not possible for a non-certified company to sell ISCC sustainable material. Recipients of ISCC sustainable material are obliged to verify on the ISCC website that the supplier holds a valid ISCC certificate. Please contact ISCC directly in case you are confronted with such a situation in order to further investigate these cases.

Click [here](#) for more information.

Markets

New partnership to boost EU market access to mycelium products

Ecovative Design is partnering with Netherlands-based CNC Exotic Mushrooms to exclusively distribute its raw materials in Europe, supporting a growing ecosystem of mycelium-based companies and products throughout the European Union.

Ecovative uses its mycelium bio-fabrication platform to grow award-winning, environmentally friendly materials used in a wide range of products—from home compostable packaging to structural composites for furniture, acoustics, and buildings—and for wetland and landscape restoration. This partnership with CNC, which produces and distributes substrates used by professional growers of edible exotic mushrooms, allows Ecovative to support companies in the EU who want to create new and better products with mycelium.

Click [here](#) for more information.

Biomass demand squeezes waste wood market

In the summer edition of the UK's Wood Recycling magazine, a feature item is the pressure being felt in the wood recycling market, brought on by increasing demand from a number of biomass developments taking in waste wood, and slow progress in ensuring compliance with fire and other regulatory requirements. Together this is resulting in a squeeze on availability, which was evident in the 2017/18 winter period which resulted in scarcity of supply.

Users are now starting to look to France and elsewhere for sources of waste wood, and exportation of waste wood may soon find domestic markets. Similarly receiving plants can no longer expect gate fees for higher quality grades of waste wood. Pressure is also being felt by the competitor wood panel industry, which fears biomass users moving from lower grade materials to higher quality grades, pushing up competition and prices for materials.

It's predicted to be a turbulent time in the waste wood market over the next 18 months.

Click [here](#) for more information.



PxHere

AEBIOM rebrands to Bioenergy Europe

AEBIOM, the European Biomass Association, has rebranded to Bioenergy Europe. According to an announcement, the new corporate identity is aimed at giving a 'clearer, more united voice to Europe's first source of renewable energy'.

Bioenergy Europe puts the rebrand down to bioenergy's consistent industrial success and growing importance to the European renewable energy mix.

At present, biomass represents more than 60% of the total renewable energy consumed in Europe. The industry employs more than 500,000 people,

according to figures from the trade association, an amount similar to the continent's pharmaceutical industry.

It is Bioenergy Europe's belief that this role requires 'greater recognition and understanding from all EU stakeholders.'

Bioenergy Europe is a non-profit, Brussels-based international organisation founded in 1990 that brings together around 40 associations and 90 companies, academic institutions and other organisations from all across Europe.

Click [here](#) for more information.

Research & Development

New project to investigate marginal land for growing industrial crops

Cultivating industrial crops on marginal land unsuitable for food production is consistently proposed as a viable alternative to minimising land use competition for food production, and its adverse effects (direct or indirect) on food security, land-based GHG emissions and biodiversity loss.

Marginal land has not yet been unequivocally defined, and there is no clear information on where, when and how much genuine marginal land is available.

Several studies agree on the existence of ~1,350,000 hectares of land in Europe deemed less favourable for conventional agriculture. This land has been either abandoned because of its

productivity, or it is used as grassland. Marginal lands for growing industrial crops (MAGIC) is based on the premise that cultivation of selected industrial crops on areas facing natural constraints (e.g. extreme climatic conditions, low soil productivity, steep slope, etc.) can ensure the production of resource-efficient feedstocks, with low indirect land-use change (iLUC), for a growing bio-based industry; and increase farmers' incomes through access to new markets and the revalorisation of marginal land.

In the MAGIC project, contaminated and degraded soils will also be included as it is well documented that the proportion of these land types is increasing due to anthropogenic activities. Contaminated soils cannot be used for food or feed production for sanitary reasons, and thus provide great potential for the production of biomass for material or energy use.

MAGIC aims at the development of resource-efficient and economically profitable industrial crops to be grown on marginal land.

The project began in July 2017 and will run for 48 months. The project aims to identify potential industrial crops for use on marginal lands and to map projections of marginal land use.

Click [here](#) for more information.



Wikimedia Commons

New enzyme shows promise for lignin conversion

Microbial aromatic catabolism offers a promising approach to convert lignin, a vast source of renewable carbon, into useful products. Aryl-O-demethylation is an essential biochemical reaction to ultimately catabolize coniferyl and sinapyl lignin-derived aromatic compounds, and is often a key bottleneck for both native and engineered bioconversion pathways. Here, the authors report the comprehensive characterization of a promiscuous P450 aryl-O-demethylase, consisting of a cytochrome P450 protein from the family CYP255A (GcoA) and a three-domain reductase (GcoB) that together represent a new two-component P450 class. Though originally described as converting guaiacol to catechol, they show that this system efficiently demethylates both guaiacol and an unexpectedly wide variety of lignin-relevant monomers. Structural, biochemical, and computational studies of this novel two-component system elucidate the mechanism of its broad substrate specificity, presenting it as a new tool for a critical step in biological lignin conversion.

Click [here](#) for more information.

IUCN report finds Palm Oil to be a lesser evil regarding biodiversity



Pixabay

A report by the International Union for Conservation of Nature concludes that banning palm oil would most likely increase the production of other oil crops to meet demand for oil, displacing rather than halting the significant global biodiversity losses caused by palm oil.

The IUCN report, *Palm Oil and Biodiversity*, is an objective analysis of palm oil impacts on global biodiversity and possible solutions. Given other oil crops require up to nine times as much land to produce than palm oil, its replacement would significantly increase the total land area used for vegetable oil production to meet global demand. Avoiding further palm oil-related deforestation will deliver the biggest gains for biodiversity by far, the report found.

The report found that palm oil is damaging global biodiversity, with 193 species assessed as threatened on the IUCN Red List affected, and orangutans, gibbons and tigers among species suffering severe harm. Palm oil impacts on biodiversity currently converge in Malaysia and Indonesia, but could spill over to tropical Africa and America as production expands to meet demand, according to the report. Because palm oil is grown in the species-rich tropics, this could have catastrophic effects on global biodiversity. Areas into which palm oil could potentially expand

are home to half (54%) of the world's threatened mammals, and almost two thirds (64%) of all threatened birds, the report found. If other oil crops replaced palm oil, the damage could shift to ecosystems such as the South American tropical forests and savannahs.

Oil palms produce 35% of the world's vegetable oil on under 10% of the land allocated to oil crops, with most palm oil consumed in India, China and Indonesia. Three-quarters of all palm oil is used for food, as cooking oil and in processed foods, with the rest used in cosmetics, cleaning products and biofuel. The authors used satellite data to estimate the total planted area at 18.7 million hectares for industrial palm oil only, which gives at least 25 million hectares when smallholder plantations are included. This is higher than the area reported by producer countries, which adds up to 21 million hectares for all palm oil.

Click [here](#) for more information.

Reports into global impact of agricultural biotechnology

The International Service for the Acquisition of Agri-biotech Applications (ISAAA) and PG Economics, Ltd. have released new studies highlighting the continued social, environmental and economic benefits of the global adoption of biotechnology in agriculture.

The complementary studies – PG Economics' "GM Crops: Global Socio-Economic and Environmental Impacts 1996-2016" and ISAAA's "Global Status of Commercialized Biotech/GM Crops: 2017" – examine the continued widespread adoption of global crop biotechnology, and the significant positive socio-economic and environmental impacts of this adoption by farmers and communities around the globe.

The ISAAA report shows the global biotech crop area increased in 2017 by 3 percent or 4.7 million hectares. This increase is due primarily to greater profitability stemming from higher commodity prices, increased market demand both domestically and internationally, and the presence of available seed technologies. As more developing countries, now 19 in total including India, Pakistan, Brazil, Bolivia, Sudan, Mexico, Colombia, Vietnam, Honduras, and Bangladesh have increased their biotech crop area and continue to allow farmers to adopt biotechnology in food production, smallholder farmers see the direct improvements this offers, allowing them to provide better lives for themselves and their families. In fact, developing countries now account for 53 percent of the global biotech area planted.

From 1996-2016, PG Economics reported biotech crops provided \$186.1 billion in economic gains to some 17 million farmers, many of whom are female, smallholder farmers solely responsible for the livelihood of their families and communities.

The PG Economics study also shows great strides have already been made to reduce the footprint of agriculture and in mitigating and adapting to climate change. The latest study highlights how biotech use in agriculture continues to contribute to reducing greenhouse gas emissions.

Coupled with the record 189.8 million hectares of biotech crops grown globally, the continued expansion of biotech adoption offers beneficial nutritional quality traits that may help offset the nutrition-draining impact of climate change on certain crops. Another aspect driving the increase may be related to research conducted by public sector institutions on rice, banana, potato, wheat, chickpea, pigeon pea and mustard with nutritional quality traits beneficial to food producers and consumers in developing countries. Studies show that climate change can considerably reduce the protein, zinc and iron content of staple crops,

putting 1.4 billion children at risk of major iron deficiencies by 2050.

For 2017, ISAAA also reports that there were improvements in the commercial availability and planting of biotech fruits and vegetables with direct consumer benefits. Two generations of Innate® potatoes have been approved in the U.S and Canada, one with reduced bruising and browning and lower acrylamide and the other with these traits plus lower levels of reducing sugars and late blight protection, along with non-browning Arctic® apples in the USA, and Bt eggplant in Bangladesh. These are all more sustainable products for consumers and the environment alike.

Click [here](#) for more information.

Field trials confirm algae more productive in polyculture

Biomass magazine reports that University of Michigan researchers have found that a diverse mix of species improves the stability and fuel-oil yield of algal biofuel systems, as well as their resistance to invasion by outsiders, according to the findings of a federally funded outdoor study.

UM scientists grew various combinations of freshwater algal species in 80 artificial ponds at U-M's E.S. George Reserve near Pinckney in the first large-scale, controlled experiment to test the widely held idea that biodiversity can improve the performance of algal biofuel systems in the field.

Overall, the researchers found that diverse mixes of algal species, known as polycultures, performed more key functions at higher levels than any single species. But surprisingly, the researchers also found that polycultures did not produce more algal mass than the most productive single species, or monoculture.

An algal biofuel cultivation system must maintain steady, stable growth of fuel-ready algae in the face of fluctuating weather conditions, the threat of population crashes caused by diseases and pests, and invasion by nuisance species of algae.

Decades of ecological research have demonstrated that plant and animal communities containing a rich mix of species are, on average, more productive than less-diverse communities, more stable in the face of environmental fluctuations, and more resistant to pests and diseases.

But the idea that algal polycultures can outperform monocultures had never been rigorously tested under large-scale field conditions.

Click [here](#) for more information.



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Wood & Crop

World's largest Dissolving Wood Pulp plant announced



Flickr

Lenzing Group, world market leader in specialty cellulosic fibres, and Duratex, the largest producer of industrialized wood panels of the Southern Hemisphere, announce that they agreed on the terms and conditions to form a joint venture to investigate building the largest single line dissolving wood pulp (DWP) plant in the state of Minas Gerais, close to Sao Paulo, Brazil. This decision supports the backward integration and the growth in specialty fibres, defined in Lenzing's corporate strategy sCore TEN.

The joint venture will investigate the construction of a 450,000t DWP plant, which is expected to become the largest and most competitive single line DWP plant in the world. Dissolving wood pulp is the key raw material for the production of Lenzing's bio-based fibres. For the future operation, the two companies have secured a plantation of 43,000 hectares that will provide the FSC® certified biomass. The plantation is fully in line with Lenzing's wood and pulp sourcing policy. The basic engineering and the application for required permits and merger clearances will now be started.

Lenzing will hold 51 percent of the joint venture which will operate the mill, while Duratex's share will be 49 percent. The estimated cash investment by the joint venture for the construction of the DWP mill is expected to be somewhat above USD 1 bn (based on current FX rates, net of generic tax refunds and the outcome of the basic engineering study). The joint venture will supply the entire volume of dissolving wood pulp to the Lenzing Group. This step is an essential milestone in the group's ambition to grow its specialty fibres business.

The final investment decision to build the dissolving wood pulp plant is subject to the outcome of the basic engineering studies and the approval by the respective supervisory boards.

Click [here](#) for more information.

Bush encroachment provides ample Namibian biomass resource

Namibia's standing wood resource, stemming from bush encroachment, is equivalent to 400 million barrels of oil, which, if valued in today's terms, is worth northwards of NAD 370 billion, or approximately three times the total gross domestic product (GDP) in Namibia for 2016.

The extraction and processing of this biomass resource have the potential to sustain thousands upon thousands of jobs, but it would also have the added benefit of supporting more productive agriculture as a result, amplifying the benefits further still.

Some will argue that the resource has not gone completely unnoticed, and that Namibians are indeed exploiting the resource, however, the magnitude of this current utilisation is unremarkable to say the least.

Take the well-established charcoal sector as an example; Namibia is one of the world's largest charcoal producers, however, the total biomass currently being extracted towards their annual charcoal production equates to a paltry 0.15% of the total standing biomass resource in the country.

Bush encroachment is largely a man-made problem, caused by generations of mismanagement, stemming from lacking information, misinformation, and myopia. Thousands of farmers are paralysed by the impenetrable thicket of bush covering their lands, as they are unable to continue rearing livestock as they once did.

Click [here](#) for more information.



US Dept. of State Archive

Use of waste wood within UK increases

Overall UK exports of waste wood biomass and panel board feedstock dropped by 50 per cent last year compared to 2016, according to the latest statistics produced by the Wood Recyclers' Association (WRA).

The trade body carried out an annual survey of its members which also showed a large increase in the use of waste wood within the UK.

The WRA estimates there remains an estimated 5 million tonnes of waste wood available for recycling and recovery in the UK. Of this, 3.7 million tonnes is recycled or reprocessed, of which 3.2 million tonnes is by WRA members.

The survey showed 1.7 million tonnes went to UK biomass plants in 2017, compared to 1.6 million in 2016. A further 1.7 million tonnes was recycled or reused into products including animal bedding, UK panel board feedstock and landscaping and equestrian surfaces. This was estimated at 1.4 million tonnes in 2016.

The remaining 300,000 tonnes was exported as biomass or panel board feedstock. This compared to 600,000 tonnes in 2016.

Click [here](#) for more information.

Florida lignin plant opened

On 26 June LignoTech Florida's new lignin plant in Fernandina Beach was officially opened.

The 110 million USD investment represents a production capacity of 100,000 metric tonnes lignin measured as dry substance. In a planned second phase, the capacity can later be expanded by 50,000 tonnes. The plant has been in test operation for some time, and the facility is now producing saleable lignin. At the time of the opening ceremony 600 tonnes had been delivered to US customers in June.

Initially it was foreseen that the products from the new plant would be sold primarily to applications within the construction industry. However, based on the inherent properties in the raw material, a number of alternative markets have been identified. The construction segment will still be very important, but the share of sales going to this end use is now foreseen to be below 50% in 2018.

Click [here](#) for more information.

Japanese and Korean contracts for Canadian pellets

Biomass magazine reports Canadian pellet producer Pinnacle Renewable Holdings Inc. announced that it has entered into two new long-term, take-or-pay off-take contracts with customers in South Korea and Japan.

The contract in South Korea is with CGN Daesan Power Co. Ltd., a subsidiary of CGN New Energy Holdings Co. Ltd. Under the contract Pinnacle will supply Daesan with 315,000 metric tons per year of industrial wood pellets, beginning in 2021. The pellet will be used to fuel a biomass power generation plant located in South Korea.

The new contract in Japan is Pinnacle's second with Toyota Tsucho Corp. Under the contract, Pinnacle will supply 170,000 metric tons per year of industrial wood pellets to Toyota Tsucho beginning in 2021. The pellet will be used by Kanda Biomass Energy K.K. in a biomass power plant in Kanda, Fukuoka Prefecture, Japan.

Click [here](#) for more information.



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Other Feedstocks

Plastic bags still viable for food waste recycling

Organics recycler Agrivert has promoted the benefits of using plastic bags as caddy liners as a way of increasing food waste recycling.

The news comes after the Waste Partnership for Buckinghamshire reported a surge in food waste recycling last month after allowing some residents to use plastic bags as opposed to compostable liners.

Agrivert is one of two companies contracted to manage food waste for Buckinghamshire at its

Wallingford anaerobic digestion facility. The other company is Olleco at its Westcott Park facility (acquired from Renewi).

Bioliners are around five times the price of plastic liners and less available, therefore they are expensive for residents to purchase.

Agrivert is also able to remove plastic bags "much more efficiently," he explained, as bioliners become "gloopy" during the anaerobic digestion process and difficult to separate.

The company has made investments in secondary screens for digestate to improve quality.

The change is also designed to increase "transparency" to the public who may believe their bioliners are being recycled, he said. Both bioliners and plastic bags removed during the process are sent for energy from waste.

Meanwhile, Olleco has explained that its Westcott Park facility can accept "limited amounts of plastic or compostable/biodegradable liners".

The AD plant receives food waste from Aylesbury Vale district council in Buckinghamshire. Residents in the district have been allowed to use plastic bags as caddy liners since the start of June 2018.

A spokesperson for Olleco said the de-packaging technology at Westcott Park "ensures materials such as plastics and compostable liners are removed from the food waste during this part of the process".

Despite some organics recyclers continuing to accept material collected in plastic liners, environmental campaigners remain opposed to the use of the material for the collection of food waste.

Click [here](#) for more information.

Report into UK waste production and use

The Digest of Waste and Resource Statistics is a compendium of statistics on a range of waste and resource areas, based on data published mainly by Defra, WRAP, the Environment Agency, Office for National Statistics, and Eurostat. They are collated in this Digest for ease of use.

The report includes data on generation and fate of waste, distribution, economics, employment, infrastructure and environmental impacts.

Click [here](#) for more information.

Companies turning food waste into useful fibres

Catherine Lamb, writing in The Spoon, highlights how the food industry is upcycling waste products. Catherine cites a piece by Fast Company predicting that the fashion of the future would be made from food waste. They were referencing Agraloop, a technology from Circular Systems which turns food crop waste, such as sugar cane bark, pineapple leaves, and hemp stalks, into low-cost natural fibres.

By diverting food waste from five widespread cash crops into a new production channel, Agraloop would be able to create 250M tons of natural fibre annually while reducing crop burn pollution and methane emissions. This April, Circular Systems won a \$350,000 Global Change Award grant from the H&M Foundation to scale up its operations and is in the midst of developing partnerships with global brands like H&M and Levis.

Aeropowder turns surplus feathers, a by-product of the poultry industry, into packaging insulators for things like meal kits. They're a double waste-fighting whammy, since they not only upcycle

poultry waste, but also reduce the amount of non-biodegradable packaging needed for cold food transport. Biobean repurposes spent coffee grains from millions of cups of joe into logs and biomass pellets to fuel fireplaces.

Moving the other way in the brewing supply chain, Regrained takes spent grain from the beer brewing process and turns it into protein bars. Snact turns surplus produce into fruit snacks like chewy jerky and banana bars. Misfit and Rubies in the Rubbleboth make use of produce that doesn't meet supermarket's aesthetic standards — the former in bottled juices, the latter in jams and chutneys.

Tyson Foods recently developed a protein crisp snack made out of food waste, such as chicken breast trim and post-juicing vegetable purée. The "¡Yappah!" snacks launched on IndieGoGo in May and are projected to ship in July of this year.

If we're ever going to reduce the roughly 1.3 billion tons of food we waste globally, we've got to tackle it from all angles: from reselling leftover food from cafés to better managing Sell-By labels to spinning hemp stalks into fabric.

Click [here](#) for more information.

Statistics on Scottish waste

SEPA, the Scottish Environmental Protection Agency, has released their latest summary of Scottish waste (from all sources) generated and managed in 2016.

The total quantity of waste generated decreased by 0.53 million tonnes from the previous year. A slight (1.9%) reduction in mixed wastes generated was accompanied by an increase in the generation of source separated materials such as animal and

mixed food waste (6.3%) and vegetal wastes (8.3%).

The quantity of animal and mixed food waste recycled by composting or anaerobic digestion in 2016 was 259,734 tonnes, which was 26.5% greater than the amount recycled in 2015.

Scottish waste recovered in 2016 was 530,022 tonnes, an increase of 13.2% from 2015, whilst Scottish waste disposed by landfill or disposed by incineration in 2016 was 3.8 million tonnes, a decrease of 10.8% from 2015.

The percentage of Scottish waste landfilled in Scotland and elsewhere in 2016 was 32.5% of all waste managed, a decrease of 427,702 tonnes from 2015. This is the lowest landfill rate recorded within the available dataset (2011 – 2016).

Click [here](#) for more information.

Leaf secures feedstock for Malaysian biorefinery

Australian biomass treatment company Leaf Resources has signed a MOU with Malaysian company Biovision & Greenergy for the supply of 100,000 bone dry metric tonnes (bdt) per annum of empty fruit bunch fibre.

Leaf will use this material to produce bio-based chemicals using its Glycell™ process.

Securing this biomass supply is a key step in Leaf's plans to develop a biorefining facility in Segamat, Malaysia.

Click [here](#) for more information.

Lottery funding for UK waste food charity

With 270,000 tonnes of edible food being sent to waste every year, FareShare delivered good surplus food to almost 7,000 charities and community groups in 2017. Working alongside food manufacturers, supermarkets, farmers and producers, the charity receives food at its 21 regional centres where an army of volunteers turns it into 28.6 million nutritious meals every year.

FareShare's charity members use the food to bring people together to enjoy a meal with each other, helping to build relationships and reduce loneliness for people facing challenges in their lives such as domestic violence, mental health, homelessness, isolation and drug or alcohol dependency. By doing so, the food turns an environmental problem into a social solution.

This new National Lottery grant will help to expand FareShare's work across its 21 regional centres, saving more than 25,000 tonnes of edible food from going to waste and providing almost 62 million more meals a year during the three years of this grant.

Volunteers play an important role in FareShare achieving its vision of turning surplus food into nutritious meals and the charity wants to deepen its connection with the communities it supports. FareShare needs people right across the UK who understand their communities to give their time by volunteering at one of its regional centres.

Click [here](#) for more information.

Events

Biomass for Industrial Applications Amsterdam, 26th-27th September 2018

The VDI conference Biomass for Industrial Applications focuses on the industrial utilization of biomass. The presentations consider both the energy-related as well as the material usage of biomass. Discuss the newest technical, economic and political developments in the industry with leading experts and find out what's in store for the biomass market in the future. This knowledge will help you to make the right strategic decisions for your company and to clear the way of implementation barriers.

Click [here](#) for more information.

International Biomass Congress & Expo Berlin, 10th-11th October 2018

The International Biomass Congress & Expo aims to bring together leading producers, suppliers, regulators and other engaged organisations over a two day period. High-level speakers, experts in their field, will address a range of topical issues relating to the biomass sector.

Brought to you by Bioenergy Insight, the leading international biomass magazine, this year's conference will be co-located with the International Biogas Congress & Expo as well as the renowned Biofuels International Conference and Expo, making this series of bio events our largest gathering yet of bio related companies, giving participants unrivalled coverage.

Click [here](#) for more information.

EFIB

Toulouse, 16th-18th October 2018

Join over 650 bio-based leaders in 2018 for the 11th edition of EFIB in Toulouse, France, on the 16th, 17th and 18th of October.

Click [here](#) for more information.

Agrocycle Mission to China

Beijing, 22nd-26th October 2018

The Agricultural waste and residue management for a circular bio-economy event will be held in China from the 22nd to the 26th of October 2018 and will bring together stakeholders from industries, research, public bodies, educators and policy-makers from China and Europe.

The programme of the event includes 2 days of plenary conferences in Beijing (22-23 October) and three days of workshops, brokerage meetings and on-the-field visits (24-25-26 October).

Click [here](#) for more information.

Feedstock Prices

UK spot prices of bagged wood pellets, and wheat and barley straw. Arrows indicate rise ↑, unchanged – or fall ↓ from previous month.

Date	UK Wood Pellets Delivered	UK Ex-Farm Barley Straw	UK Ex-Farm Wheat Straw
	(£/tonne, 5% VAT)	(D1000) (£/tonne)	(D1000) (£/tonne)
10 Feb	275-316 (–↓)	55-100(––)	45-100(–↑)

For wood pellets prices we considered UK pellet traders selling prices.

For details on straw spot prices, see <http://www.farming.co.uk>

UK, French, and US future prices for wheat, rapeseed, maize, and soybean. Arrows indicate rise ↑, unchanged – or fall ↓ from previous month's predictions.

Date	UK (LIFFE) Feed Wheat (£/tonne)	MATIF Wheat (€/tonne)	MATIF Rapeseed (€/tonne)	CBOT Wheat (cnts/bsh)	CBOT Maize (cnts/bsh)	CBOT Soyabean (cnts/bsh)
Aug-18			359.7 (↑)			847.75 (↓)
Sep-18		191.2 (↑)		513.7 (↓)	357.2 (↓)	853.50 (↓)
Nov-18	176.5 (↑)		364.5 (↑)			862.75 (↓)
Dec-18		193.0 (↑)		532.2 (↓)	371.2 (↓)	
Jan-19	181.7 (↑)					872.75 (↓)
Feb-19			364.7 (↑)			
Mar-19	184.5 (↑)	194.2 (↑)		549.5 (↓)	382.5 (↓)	882.00 (↓)
May-19	183.0 (↑)	195.7 (↑)	365.0 (↑)	557.7 (↓)	389.0 (↓)	891.25
Jul-19	182.1 (↑)			561.2 (↓)	395.0 (↓)	
Aug-19			349.5 (↓)			
Sep-19		187.2 (↑)		569.7	395.7	
Nov-19	169.0 (↑)		355.5 (↓)			
Dec-19		189.5 (↑)				
Jan-20	170.6 (↑)					
Mar-20	170.9 (↑)	192.7 (↑)				
May-20	170.3 (↑)	193.7 (↑)				
Nov-20	165.9					

For details on future prices see <http://www.hgca.com>

Other biomass feedstock prices are available upon request, simply contact enquiries@nnfcc.co.uk

Credits and Disclaimer

NNFCC News Review is edited by Bob Horton for NNFCC Subscribers. Feedback is welcome. The Review has been compiled in good faith and NNFCC does not accept responsibility for any inaccuracies or the products or services shown.

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