

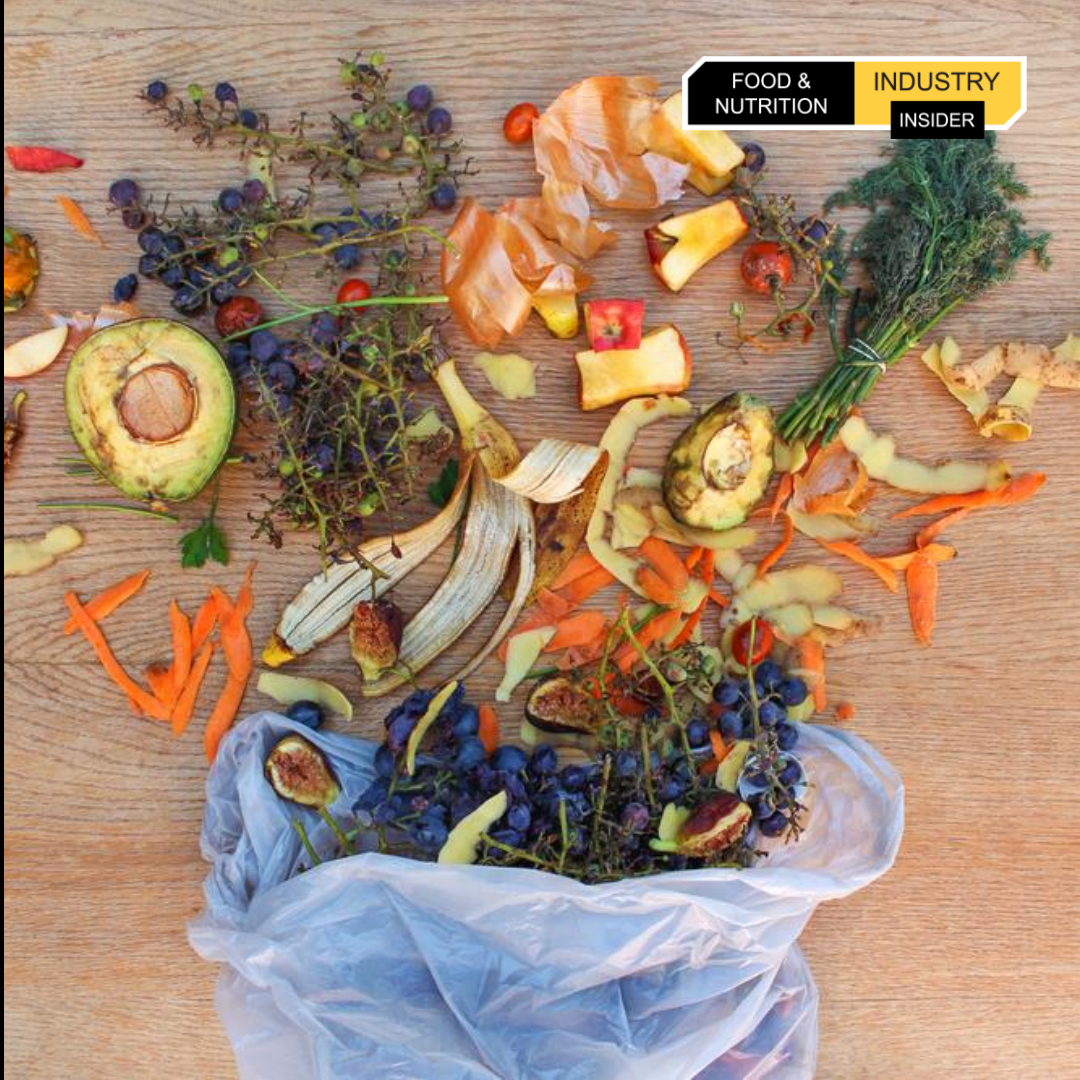


Food & Nutrition Insider

Special Bulletin: Upcycling Food Waste

FutureBridge

FOOD & NUTRITION INSIDER



Food waste & food loss occur along the entire food chain

HIGH COST OF FOOD WASTE

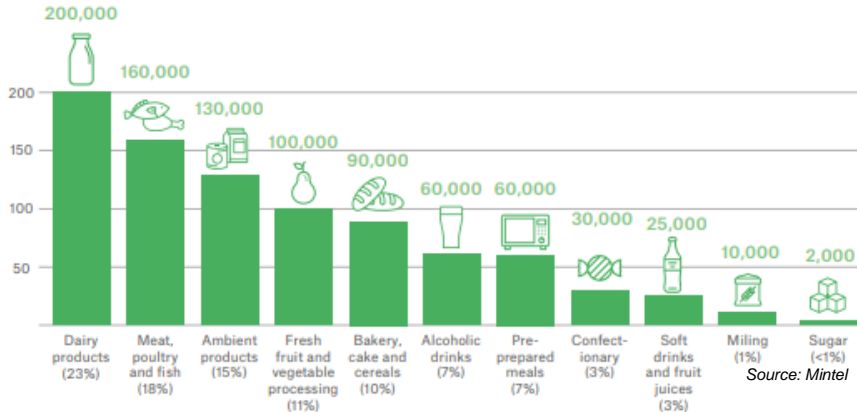
1.3 Billion tonnes...

...of food is **lost or wasted** every year



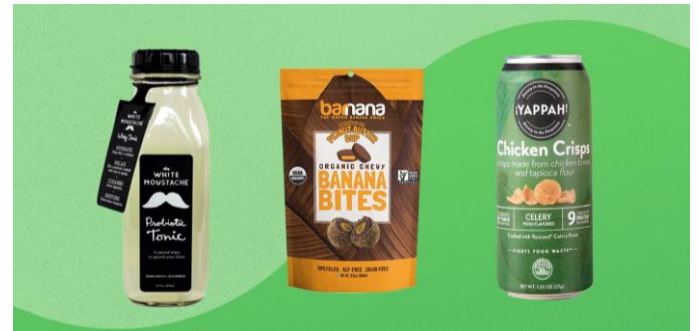
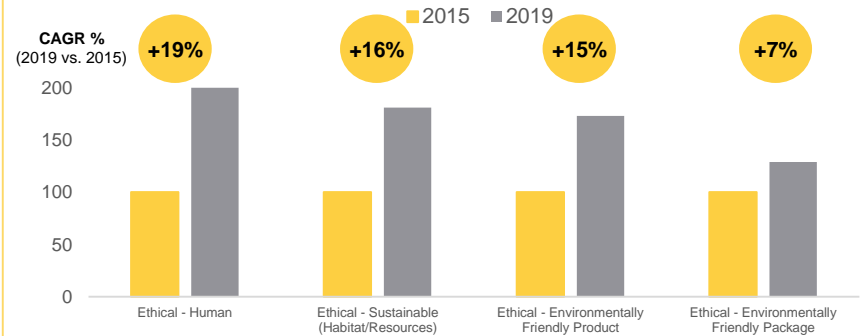
*Source: FAO

How much avoidable food & drink waste occurs by manufacturing sub-sectors (tonnes of avoidable waste / % of the total manufacturing avoidable waste)



COMPANIES COMMIT TO BUILDING A MORE SUSTAINABLE BRAND


Fastest growing sustainable claims tracked in new product launches (Global, 2019 vs. 2015)



Start-ups innovating in the upcycling of food waste, collaboration is key to move forward in this field


START-UPS INNOVATING WITH FOOD WASTE

OUTCAST
UPCYCLED NUTRITION™



Outcast take the “unsellable” misfit produce that would otherwise end up in a landfill emitting methane gas and take it to their zero-waste facility where it becomes dried whole food powders.

Eggbrane®



Eggbrane® is a natural product obtained from fresh hen eggs by separating the membrane from the eggshell. The separation is made with an individual mechanical method based on a certain water flow rate and pressure conditions, without using chemicals or any other additives. The eggshell membrane contains nutrients that are required by the body to maintain and rebuild cartilage and bone: Collagen, hyaluronic acid, glucosamine and chondroitin sulfate.

Agricycle



Agricycle Global is a vertically integrated portfolio of ethically sourced and upcycled brands that work together to achieve its mission of eradicating extreme rural poverty through market-based solutions.

I AM GROUNDED



I Am Grounded is a better-for-you snack company that combines the benefits of upcycled coffee fruit, plant micro-nutrients and natural energy to support a healthy sustainable lifestyle.

KELLOGGS COLLABORATES TO REUSE POOR QUALITY CEREAL WASTE



Overcooked, uncoated or discolored cereals destined for waste



Greencovery: Helping food and beverage companies discover what's valuable in their waste streams



Country: Netherlands

Funding: €85K

Technology: Greencovery have developed a new technology that helps food manufacturers recover valuable products from their side-streams



They will identify which products can be recovered from your side-streams and in which quantities.



They will make the required trials to understand the recovery process needed and make the techno-economical analysis to bring the products to market.



Greencovery will work with the client designing the industrial process and the required capacity to start production.

Waste Ingredient Discovery



Banana flavor (natural isoamyl acetate) is recovered from the **side-stream of vinegar production**, and their client is ready for the first commercialization batches



Organic and vegan ingredient for the **plant-based meat** industry, designed to **improve the texture** of these products

Explanatory Video



Creating sustainable packaging materials from food- and agri-waste is a growing segment in the industry

START-UPS INNOVATING WITH WASTE



Apeel uses materials that exist in the peels, seeds, and pulp of all fruits and vegetables to create a protective extra peel that seals moisture in and keeps oxygen out. This peel is tasteless, odorless, plant-based protection on the surface of fruits and vegetables.



W-Cycle, an Israeli food tech start-up has developed SupraPulp, plastic-free packaging made of sugar cane waste that is fully compostable, safe, yet durable enough to be used for greasy, wet, or hot food. SupraPulp is compostable, non-coated, toxin and metal free.



Mango Materials' technology uses waste biogas (methane) to produce poly-hydroxyalkanoate (PHA) powder, a biopolymer that is converted into a variety of eco-friendly, plastic products.



Varden has developed a process to take the waste material from sugarcane and convert it into a paper-like packaging product with the functional attributes of plastic.

CARGILL LINKS UP WITH VIRENT TO UPCYCLE AGRI-WASTE



The two companies are working together to evaluate the use of **Cargill's corn dextrose** as a feedstock for **Virent's BioFarming technology**, producing raw material for packaging solutions



Thank you

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