

Demand centers for low-emission ammonia: Global fertilizers

OIS am

12.22

11.39

11.69

76,129,000

2.04

222

November 12, 2024

Have you heard these quotes before?

"The **ag sector** will be the **last mover** into low-carbon ammonia/fertilizers"

"Farmers simply cannot afford the higher cost of low carbon fertilizers"

"Farming needs government subsidies for financial support and low carbon fertilizers will increase their needs"

"Ag products **demand incentive are required** for farmers to afford low carbon fertilizers"

The Ag Sector will need to decarbonize by 2050



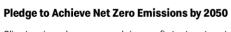
ANNOUNCED

In 2021, our ambition to achieve net-zero GHG emissions, including Scopes 1, 2 and 3 emissions, by 2050



Reach net zero carbon

- Reach net zero in scope 1 and 2 by 2030
- Reduce scope 3 emissions by 21% by 2030
- Reduce emissions across our value chain (scope 1, 2) and 3) by 30% by 2030
- Reach net zero across our value chain by 2040
- 100% sustainably sourced ingredients (hops, barley) by 2030



Climate science has progressed since we first set our targets in 2018, and we are raising our ambition to meet current recommendations and guidance from the SBTi. In 2021, we joined the United Nations Race to Zero campaign, pledging to put McDonald's on the path to net zero emissions by 2050.



Reduce absolute emissions by 25% by 2030 against a 2015 baseline

Ambition to achieve net zero emissions by 2050



Net-zero emissions: PepsiCo sets an ambitious new target to achieve net-zero emissions by 2040, one decade earlier than called for in the Paris Agreement





greenhouse gas ZERO emissions by 2050

Land Use Change

MARS

2015 VALUE CHAIN GREENHOUSE GAS EMISSIONS

Measured in million tonnes carbon dioxide equivalent (MtCO2e)

NET



- Reduce the carbon intensity of bioethanol by 70% compared to traditional gasoline by 2030.
- Continue to invest in technology to advance the development of low-carbon bioproducts that can displace more fossil-based fuel products
- Transition POET's bioprocessing facilities to carbon neutrality by 2050.

Kraft*Heinz*



New Goal: net zero GHG emissions by 2050 and 50% reduction by 2030 reduction across all three scopes with a 2021 base year



Working Toward Net Zero

For the past few years we have been on a path to reduce our carbon emissions and in 2021 we took an important step forward – aiming toward a long-term goal of net zero GHG emissions across our full value chain by 2050.1



SDG 13 CLIMATE ACTION

by contributing to the fight against climate change notably by committing to achieve net zero emissions along our entire value chain by 2050



Our Net Zero Roadmap to reduce Nestle's in scope emissions:

- by 20% by 2025 compared to 2018 baseline
- by 50% by 2030 compared to 2018 baseline
- to be net zero by 2050

The use of low carbon fertilizers has already started...

The first LAY'S and Ruffles cultivated with Fertiberia's Low-Carbon fertilisers are now on the market

Barcelona, 16 May 2024. The PepsiCo and Fertiberia pilot programme for the use of Impact Zero low-carbon crop nutrition solutions launched last year has already delivered its first results, and the first Lay's and Ruffles potatoes with reduced emissions during their growing process have already hit the Spanish market. In total, almost 9,000 tonnes of high-quality potatoes grown on about 200 hectares of fields in Álava, La Rioja and Burgos have been produced, and emissions have been reduced by 85,000 kg of C02eq thanks to the use of sustainable fertilisers. This more environmentally friendly crop produced 3,000 tonnes of potato chips at the PepsiCo plant in Burgos.

Heineken Spain and Fertiberia promote the world's first low-carbon crop nutrition solutions

Madrid, 15/09/2023 – HEINEKEN Spain's commitment to sustainability and its 'Decidedly HEINEKEN' roadmap directly involve agriculture, a sector that currently accounts for 30% of the brewery's carbon footprint. For this reason, it is working with leading partners such as Fertiberia to support the transformation and ecological transition of Spanish farmers with a pioneering project, which aims to contribute to decarbonising the cultivation of malting barley. The alliance between the two companies has made it possible to use the first low-carbon, Impact Zero fertilisers produced with green hydrogen to replace natural gas.

Chivas Brothers and Simpsons Malt Limited partner on pilot of carbon-saving fertiliser creating 'greener' whisky

The UK exclusive pilot leverages OCI Global's innovative low-carbon fertiliser, which has the potential to reduce the amount of greenhouse gas emissions created in the growing of barley and wheat for whisky production by up to 20%

CF Industries and POET to Demonstrate the Use of Low-Carbon Fertilizer in Corn Production to Reduce Carbon Intensity of Ethanol

By: Corporate Communications July 15, 2024 CF Industries Holdings, Inc. (NYSE: CF), a leading global manufacturer of hydrogen and nitrogen products and the world's largest producer of ammonia, and POET LLC, the world's largest producer of biofuel and a global leader in sustainable bioproducts, today announced a collaboration to pilot the use of low-carbon ammonia fertilizer to reduce the carbon intensity of corn production and ethanol. Demand for ethanol with a lower carbon intensity is expected to increase significantly to meet low-carbon fuel standards.

PepsiCo Europe and Yara partner to decarbonize crop production

16 July 2024, Brussels - Oslo: PepsiCo Europe and Yara announced today a long-term partnership in Europe aimed at providing farmers with crop nutrition programs to help decarbonize the food value chain.