

CF Industries and POET to demonstrate use of Low-Carbon Fertilizer in Corn Production

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Aim to Reduce Carbon Intensity of Ethanol



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CF Industries Holdings, Inc., 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.

Ammonia is commonly used as a direct application fertilizer for U.S. corn production, but the conventional ammonia production process is emissions intensive. As a result, ammonia production is a significant contributor to the lifecycle carbon intensity of corn production and thus ethanol production. Producing ethanol with corn grown using low-carbon ammonia can reduce the carbon intensity of ethanol up to 10 percent. The companies are targeting the fall of 2024 for the first applications

of low-carbon ammonia with subsequent applications in spring of 2025, to produce a first crop to be harvested in the fall of 2025.

The companies intend to jointly develop a low-carbon fertilizer supply chain to track, validate and certify carbon intensity reduction originating from low-carbon ammonia manufacturing at CF Industries's Donaldsonville Complex in Louisiana, through ethanol production at POET's locations in Bingham Lake, MN, Emmetsburg, IA, Fairmont, NE and North Manchester, IN. This includes implementing supply plans with fertilizer retailers serving farms that supply corn to these POET bioprocessing plants and developing monetization opportunities for farmers who use this low-carbon fertilizer. Producers can reach out to their local POET grain merchandiser for more information.

For the demonstration project's fall 2024 and spring 2025 low-carbon ammonia applications, the companies will leverage green ammonia produced at CF Industries's Donaldsonville Complex. Green ammonia refers to ammonia produced with hydrogen sourced from an electrolysis-based production process that produces no carbon dioxide emissions but is otherwise identical to commodity ammonia. CF Industries recently completed installation of a 20MW electrolyzer at its Donaldsonville Complex. Start-up of the electrolyzer is imminent and the Company intends to purchase renewable energy certificates to pair with the start-up to enable green ammonia production. CF Industries will have additional low-carbon ammonia at the Donaldsonville Complex beginning in 2025 when a large-scale carbon capture and sequestration project at the facility commences.