



Knowledge grows



# Reduce your product carbon footprint with green fertilizer

As one of the world's leading fertilizer manufacturers Yara will start in 2023 to produce nitrate fertilizers using renewable energy. With these green nitrogen fertilizers and other measures, farmers, processors, and distributors can easily reduce the carbon footprint of their products.

## Fossil-Free Value Chain

A significant portion of emissions in food production originates in agriculture. Nitrogen fertilizer production accounts for approximately 30% of emissions in crop cultivation. Green fertilizers are produced using green hydrogen and represent a crucial step toward environmentally friendly food production. Their use can reduce the carbon footprint of food by up to 15%. These fertilizers can be integrated into cultivation programs and combined with other climate protection measures, ultimately forming a fossil-free value chain over time.

Yara is planning partnerships across the entire value chain. We recently initiated a pilot project with the Bindewald-Gutting Mühlen Group and Harry-Brot in Germany. This collaboration covers the entire production process, from the field to the finished bread.



Green fertilizers can reduce the carbon footprint of food by up to 15%



Up to **90%\***



Up to **30%\***

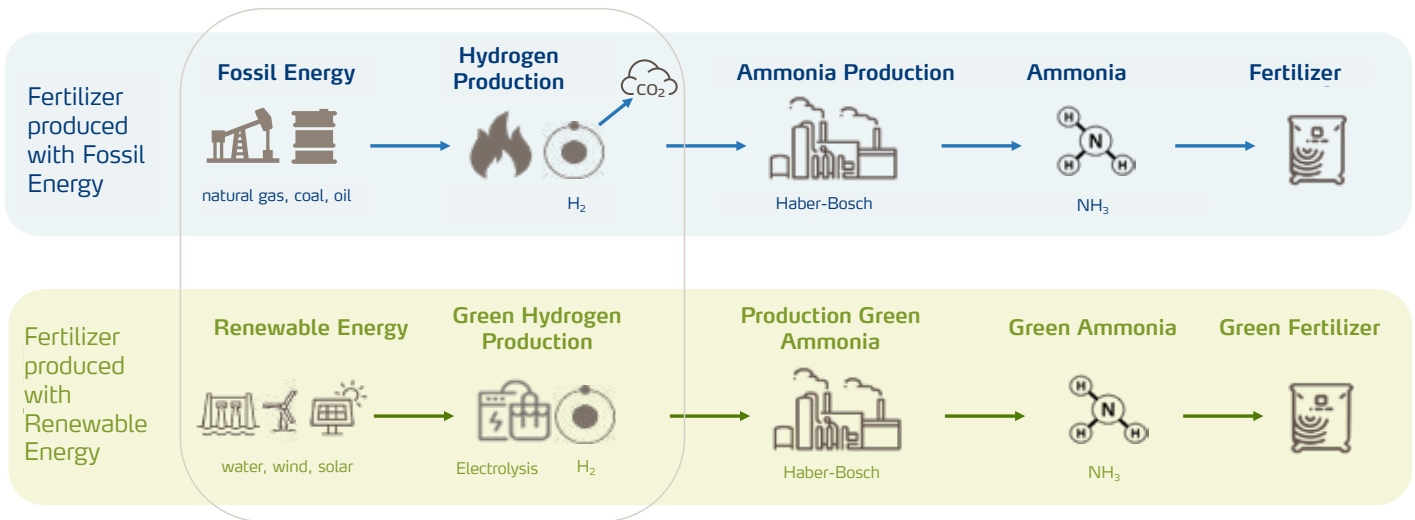


Up to **15%\***

\* Illustrative depiction: Actual reductions may vary depending on the country of origin, year, and season.



## Green ammonia is produced with hydrogen from electrolysis



### What Are Green Fertilizers?

The production of nitrogen fertilizers requires ammonia, which is currently produced using fossil fuels, releasing substantial amounts of CO<sub>2</sub>. In contrast, ammonia for green fertilizers is produced using renewable energy sources, such as water and wind power. The hydrogen required for ammonia synthesis is obtained through electrolysis. The result is nitrogen fertilizers with up to 90 % lower carbon footprint. Yara operates a pilot plant in Norway, and by the end of 2023, the first green fertilizer will be available.

### Effective use is crucial

At least another third of emissions in agriculture is generated in the field due to nitrogen fertilization. Yara has the expertise to increase fertilizer use efficiency and thus reduce the carbon footprint of food. We advise farmers and offer a range of products and tools, such as the Yara N-Sensor and N-Tester. Furthermore, we assist our partners in documenting and verifying carbon

savings. Food companies can use these results in their reports and create new carbon-reduced product lines.

No one can decarbonize the food system alone, but together, we can achieve it. Interested in a partnership? Then, contact us:



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