The fertilizer industry is committed to playing its part to reduce GHG emissions and the general environmental footprint from the production of fertilizers and has already made great strides.

This year marks the 5th Anniversary of the Paris Agreement.

Achieving the goals from the accord will require a significant reduction in global greenhouse gas (GHG) emissions, ideally 40% to 50% by 2030.

SUSTAINABLE FERTILIZER PRODUCTION

Reduced CO₂ Emissions

Since 2004, IFAs voluntary benchmarks have observed a 14.5% reduction in the CO₂ emissions rate per tonne of ammonia produced by participating members mainly due to investment in plant revamps as well as new and efficient capacity coming online.

Reduced Nitrous Oxide (N₂O) Emissions

Since the implementation of innovative technological solutions in advanced catalytic processes, some fertilizer producers have achieved an aggregate reduction of over 85% of N₂O emissions (and a potential of 90 to 95% could be achieved with a more widescale implementation).

Improved Energy Efficiency

Plants built today with the best available technologies use 30% less energy per tonne of ammonia produced compared to older plants; while older plants have also shown tremendous progress in cutting their energy requirements through improvements and upgrades on their production sites.

Carbon Capture and Reuse

The capture and re-use of CO₂ emitted by fertilizer plants has enabled production sites to measurably and consistently reduce their GHG emissions from fertilizer production. IFA members around the world successfully capture hundreds of thousands of tonnes per year.

Reduced N₂O

Carbon Neutral Production

Academic institutions, R&D centres, and IFA members are actively pursuing phosphorus and nitrogen recycling to save energy compared to mining and transport while supporting sustainable agriculture. Several plant scale trials are under way to place mined phosphates by recovering phosphorus from meat, bone and sewage sludge ash and as well as struvite.

Phosphogypsum Re-use

Phosphate and potash producers have a range of schemes in place to reclaim land used for mines and other productions purposes, many of which help to sequester carbon in soils. In 2017, for example, producers operating in the U.S. reclaimed 1,172 hectares of land.

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