



Fact Sheet - Agriculture

- 80% of the world's demand for ammonia comes from agriculture, as ammonia is used to help add nitrogen, an element that is essential for plants, back into soil that has been depleted by growing crops.
 - Nitrogen (N) is essential to farming
 - Ammonia (NH3 one molecule of Nitrogen and three molecules of Hydrogen) is an extremely efficient carrier of nitrogen.
- **The problem:** The traditional way of producing ammonia is one of the most energy intense,

carbon emitting industrial processes on earth. As well, the traditional ammonia supply chain is fraught with problems, from wildly fluctuating prices, to sudden reductions in product availability.

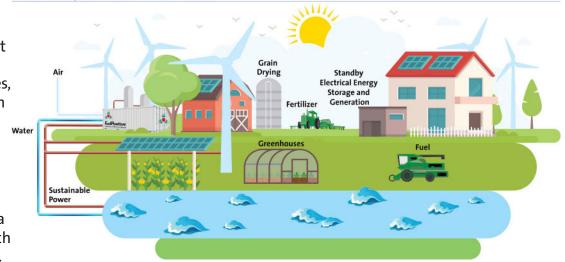
The solution:

 FuelPositive's green
 ammonia production
 system economically
 provides the ammonia
 needed for fertilizer with
 zero carbon emissions.
 It allows for farmers to

produce, on site, the amount of ammonia they need, thereby avoiding supply chain dependence and fluctuations.

 Small and large-scale farms will use FuelPositive's in-situ production systems where there is access to sustainable electricity to independently generate their own green ammonia to use as fertilizer for their fields and as fuel for their farming equipment, tractors, generators, coolers and grain drying.

The FuelPositive System Generates **Zero** CO2e Emissions



¹ Government of Canada, <u>Common Air Pollutants</u>. Found on July 15, 2021.



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What about just using manure?

- Manure contains polluting ammonia that is naturally produced.
 - For mixed use farms (those that have livestock and crops) manure (a natural by-product of livestock) is a "free" form of fertilizer (but extremely environmentally costly down the road).
 - Farmers spray liquid manure on the ground, which releases gaseous ammonia into the atmosphere and creates a situation where rain and runoff move a tremendous amount of highly nitrogen-intense materials into waterways and water tables causing significant detrimental effect (pollution) to air and water quality.
 - Resting manure piles release gaseous ammonia into the atmosphere, which becomes a pollutant, particularly when the gaseous ammonia mixes with other airborne pollutants.

- FuelPositive believes that the practice of injecting green ammonia deep into the soil is the best solution to the issue of how we keep our farms well fertilized, while protecting our environment.
 - This allows the nitrogen to be released where it's needed and the hydrogen to safely evaporate into the atmosphere.

Link to this section on our website.