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Agrology unveils the First-to-Market Low-Cost Nitrous Flux Sensor for Agriculture

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Agrology launched the first real-time, in-field nitrous oxide (Nâ??O) flux sensor, breaking new ground for climate-smart agriculture. This technology advances efforts by farmers, academics and supply chain partners who are seeking scalable solutions to accurately measure nitrous oxide and other GHG emissions at scale in commercial agriculture. Currently undergoing rigorous in-field validation with experts and partners, the Agrology Nitrous Flux Sensor is available in limited quantities, with a commercial release slated for early 2025.

â??Agrology's Nitrous Flux Sensor is a paradigm shift in sustainable agriculture as it provides any grower with an affordable, accurate, and continuous tool to measure, reduce, and monitor nitrous oxide emissions, and thus enables GHG reductions

and innovations at the source while replacing static factors and rigid, non-conforming models.â?

The agricultural sector recognizes its role in Nâ??O emissions and has sought ways to mitigate them. However, reducing Nâ??O emissions and achieving accurate impact quantification have been challenging due to the lack of affordable measurement tools. This gap has forced farmers and supply chains to rely on estimated emissions factors. Agrologyâ??s new sensor solves this problem at a fraction of the cost of research-grade equipment.

Adam Koeppel, Co-Founder and CEO of Agrology, highlighted the challenge and opportunity: â??Accurately measuring Nâ??O emissions at scale has been a significant barrier, limiting the adoption of practices that reduce greenhouse gas emissions. Our Nitrous Flux Sensor changes that by enabling precise nitrogen application without compromising yield, empowering growers to implement agricultural practices that lower emissions effectively.â?

The launch of Agrology's Nitrous Flux Sensor addresses the critical challenge of nitrogen fertilizer management. Fertilizer applied at the wrong time, location, concentration, or in the wrong form not only releases Nâ??O but also causes water pollution and biodiversity loss. With Agrologyâ??s sensors, growers can measure and verify the impact of climate-smart nitrogen management strategies. These tools, combined with nitrogen reduction programs, support insetting initiatives by providing in-situ data that transparently quantify emission reductions. Growers can benefit from incentives beyond fertilizer savings, further encouraging sustainable practices.