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## **Gas Technologies Reports Completion of New Fertilizer “Add-On” Technology with Inventor and Board of Advisor, Dr. Arthur Nonomura**

PETOSKEY, MI -- (May 14, 2010). Gas Technologies LLC (GTL) is pleased to report the completed designs and cost/revenue estimations on the new GasTechno® fertilizer add-on technology. The solution is technically superior to those being promoted worldwide.

Add-on technologies that formulate GasTechno's mainstream compounds into agricultural products or that contribute alcohols into organic derivatives are being engineered into commercial projects. The inventor, Dr. Nonomura, has worked on the core agrichemicals and horticultural systems with over a hundred international patents issued in the field.

The mixed alcohols straight out of GasTechno's distillation will initially be incorporated into agrichemical adjuvants. One of the fundamental features of plant nutrients is that they can be fed through leaves as well as roots, provided that the nutrients applied to the leaf can make it past its waxy cuticle. Penetration through the hydrophobic phylloplane can be accomplished via agricultural wetting agents.

The big news is that alcohols make wetting agents wetter! For example, automobile windshield washers contain up to half their volumes in alcohol with only a fraction of the volume as surfactant. The reason is that when alcohols are present, they effectively spread the water solutions across the surface of the glass—without beading—as they cut through the road grime.

Only recently have we found that plants can thrive on similarly high concentrations of alcohols. In fact, they feed on the carbon fixed into alcohols and turn them into sugars. Thus, in the same manner as windshield cleansers, fractional amounts of agricultural surfactants are made into highly effective wetters and spreaders when dissolved in high concentrations of alcohols. The alcohols, when formulated to penetrate into the leaves, are safe and effective agrichemical adjuvants because supplementation with alcohols effectively spreads the wetter across the waxy cuticle of leaves without beading. The primary benefit is that the alcohols allow the most effective penetration of fertilizers and other agrichemicals.

Green plants naturally produce their own alcohols that are identical to GasTechno's alcohols; therefore, pathways are present in Nature for plants to utilize alcohols for growth. In

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other words, alcohols help agriculture in several ways. Alcohols are the best spreaders for making wetting agents wetter. Alcohols enable effective penetration of agrichemicals into leaves and once inside, they may be utilized by plants for growth.

In consideration of these benefits to agriculture, GasTechno shall introduce initially an alcohol-based agrichemical surfactant product that will provide the triple benefits of premier wetting and spreading and penetration for uptake by leaves to benefit growth.

The direct application of metabolites of alcohols that are utilized by green plants for growth has been studied and proven in laboratory and field applications. These metabolites require sophisticated commercial product formulations and active ingredients that are not available at commercial quantities. Therefore, GasTechno is planning on taking advantage of this opportunity to be the sole manufacturer of these add-on organic derivatives, i.e., they are being engineered into GasTechno's commercial projects. Manufacture of these acyl- and alkyl-substituted carbohydrates will be incorporated into fertilizer formulations. Without any other bulk manufacturers and no domestic commercial sources of these active ingredients, GasTechno presents a clear market advantage.

Certain of these carbohydrates are metabolized by plants better than glucose and made into all natural starch, proteins and oils. You can be assured that they are safe.

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Gas Technologies is dedicated to becoming a world leader in the single-step conversion of methane into valuable commodity fuels and chemicals via the GasTechno® family of technologies. Their latest designs include totally Integrated Biorefineries and these, in combination with the totality of GTL's technologies, can monetize small scale sources of methane and biogas where no economically viable alternatives exist.

Dr. Nonomura received his degree from the University of California, and immediately joined up with Nobel Laureate Melvin Calvin and Drs. Al Bassham and Fred Wolf to help find a solution to the first gasoline crisis thirty years ago. Over the years, the discovery has been verified by eminent scientists at leading universities and scientific institutions worldwide who proved all aspects of this discovery of the first order. Research later followed the path of carbon in photosynthesis with a founding member of the Nobel Team, Andrew A. Benson, Scripps Institution of Oceanography.

Industrial experience was gained by Dr. Nonomura while the corporate fellow at Dow Chemical Company. Currently retired from Dow, Dr. Nonomura has been targeting the enhancement of transmembrane transport in agriculture.