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Pursell Biodegradable coating paves way for sustainable fertilizer innovation

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USPTO patent application filed on novel coating technology that will make biodegradable controlled-release fertilizer a viable solution to address industry sustainability challenges



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Pursell has filed a non-provisional patent with the U.S. Patent and Trademark Office (USPTO) to protect Intellectual Property related to its biodegradable coating components and application process. The company is currently in end-stage research and development of a novel coating technology that will enable commercialization of controlled-release fertilizer (CRF) products meeting European Union (EU) biodegradability standards.

Pursell's patented, lower-temperature coating process enables the incorporation and survival of best-in-breed biostimulants and microbes. This unique capability allows Pursell to deliver a biodegradable CRF product with nutrient uptake and a biostimulant package tailored to a cropâ??s specific needs.

â??Our current coating technology utilizes an extremely thin membrane, which already decreases the amount of polyurethane used in the process. This biodegradable technology, coupled with biostimulant inclusion, has the potential to be a true game-changer for both Pursell and the fertilizer industry at large,â?• said Joe Brady, Pursell CFO and Sustainability Initiatives Lead. â??When introduced, our biofortified, biodegradable CRF products will offer the broad benefits of our current products, without any of the potential effects of non-biodegradable coatings.â?•

Application of Pursell biofortified, biodegradable CRF products will not require growers to change their standard growing practices and will help them achieve:

- Increased plant and soil health
- Higher yields and crop quality

- Substantial sustainability benefits through minimization of nutrient leaching into waterways, GHG emissions and volatilization

â??Ultimately, nature provided the key to unlocking the possibility of biodegradable controlled-release fertilizers,â• said Brady. â??Our coating technology will allow us to introduce a simple-to-use, single-source product that offers meaningful benefits to farmers and the public.â•

â??Our research has shown that the use of controlled-release fertilizers is an effective approach to improve nutrient use efficiency and reduce environmental pollutants,â• said Dr. Upendra Singh, IFDC Vice President, Research. â??We are currently performing degradation tests on Pursellâ??s biodegradable coating technology and are excited about the additional soil health benefits it may offer.â•

Initial biodegradable product field trials are being conducted this spring in university and industry grower trials in the Midwest, Southeast and Canada, targeting corn production.