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Potato storage technology with Precision Ethylene Treatment (PET) introduced by Restrain

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Restrain has announced the launch of its new Precision Ethylene Treatment (PET) technology, setting an unprecedented standard in storage solutions. This pioneering advancement continues Restrainâ??s legacy of innovation, ensuring optimal potato preservation through the precise application and control of ethylene, a natural plant hormone crucial for maintaining potato quality.

Ethylene, a colourless gas naturally occurring in all plants, plays a vital role in various physiological processes such as ripening, ageing, and stress responses. For two decades, Restrain has harnessed the power of Ethylene to revolutionise potato storage, keeping potatoes sprout-free, quality-stable and market-ready.

Restrain's Ethylene systems seamlessly integrate into commercial bulk, box, ambient and refrigerated storage facilities without requiring costly modifications. Our catalytic generators, designed and manufactured in-house since 2017, enhance safety, ensure quality, reduce costs, and foster continuous innovation. Leveraging advanced microcomputer technology, our systems offer unparalleled control and future-proof internet connectivity for real-time monitoring.

Following the European 2020 ban on CIPC, Restrain emerged as the preferred solution for major french fry manufacturers and fresh potato suppliers. As priorities evolved, our focus expanded to address fry colour and weight loss, cementing our leadership in Ethylene management for potato storage.

By 2023, Restrain had integrated iCloud technology for real-time remote monitoring and adaptive storage control. Our ongoing research and newly patented systems drive continuous advancements, solidifying our position at the forefront of potato

storage innovation.

Soon in this year, Restrain will unveil Precision Ethylene Treatment (PET) technology, the most significant innovation in potato storage yet. This advanced method introduces and maintains optimal ethylene levels in potato stores, preventing sprouting, preserving sugar levels, protecting fry colours, and minimizing weight loss through three revolutionary steps:

- **The Sensor:**Â Restrain's newly designed ethylene sensor offers unparalleled accuracy and response time, excluding interference from other molecules. It measures carbon dioxide, temperature, and relative humidity, providing comprehensive monitoring.
- **The Pulse:**Â The innovative ultra-low dosing pulse system delivers controlled ethylene at parts per billion, below sensor detection levels. This prepares potatoes for higher ethylene levels, effectively suppressing sprouting while minimizing respiration to protect fry colour and reduce weight loss.
- **The Control:**Â Restrain's state-of-the-art ethylene control management system employs sophisticated algorithms to establish and maintain precise ethylene levels in commercial storage facilities. This gradual increase in ethylene levels ensures superior storage outcomes.