How AI Helps Keep Your Lettuce Crisp Longer (and Much More)

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We hear a lot of talk about artificial intelligence these days. But there is one crucial application that has been left out of the conversation: AI can help extend the life of your leafy greens.

As Tim Bates of Quality Custom Distribution (QCD) explained during a recent webinar about AI and cold chain logistics: "Lettuce that is kept at 39 degrees, which is still in spec, only lasts half as long as lettuce that has been maintained at 34 degrees. So, if you can deliver a lower-temperature product without freezing it, your customer is going to get better performance on that product."

And how can motor carriers walk that temperature tightrope?

For QCD – an industry leader that completes more than 1.8 million deliveries each year to some 7,500 restaurants – the answer is EROAD's CoreTemp technology, which provides predictive analytics via AI and machine learning.

Being able to turn data generated by a refrigerated trailer into actionable predictions is a huge benefit of AI in the cold chain space. It helps carriers to be more precise and proactive when optimizing temperatures to ensure successful deliveries, satisfied customers and regulatory compliance.

As Bates noted: "The speed at which you get answers allows you to be a better manager because you've got more information to make a decision with."

Moreover, the real-time temperature monitoring that CoreTemp provides eliminates the need for manual temperature checks and reduces the administrative burden associated with reporting to customers and regulators, helping to ensure temperature accuracy while cutting operational costs.

AI and Conflicting Operational Priorities

AI also helps carriers mitigate operational conflicts. Improving your routing, for instance, can boost efficiency. But better routing can be tough on reefer trailers because it results in the doors being opened more often, raising the risk of temperature excursions.

However, predictive analytics paired with tools like two-way reefer controls allows carriers to make adjustments before a problem occurs.

"We can make sound decisions based on that data," Bates said.

As growth occurs, complexity increases and regulation evolves, AI can help carriers stay ahead of the challenges and operate successfully.

"Unexpected conflicting priorities is something that AI is going to have to help us deal with," Steven Perrin, product and solution manager at EROAD, said during the webinar. "And there are a number of other things that we hope AI will be able to help us with because as this growth happens, the infrastructure and some of the supporting services that we may not think about are going to come under pressure as well"

Artificial Intelligence and Fleet Health

AI can help carriers maintain healthier fleets overall. By analyzing assets and how they are used, AI can predict when components are likely to fail and recommend preemptive repairs, reducing the chances of costly, unexpected breakdowns and extending the lifespan of equipment.

"We're using some very high-level data science to actually predict if a piece of equipment is going to shut down in the next seven days," Perrin said. "What we're looking to do here is de-risk the use of equipment for our customers going forward so they can make really good decisions attaching equipment to routes."

AI and the Future of the Transportation Industry

Today, AI is turning vast amounts of data into actionable insights that help carriers make better decisions in the moment and in the long term. One day – and that day might not be too far off – AI may be making some of these operational decisions on its own (with human oversight, of course). Routine processes like reefer pre-cooling, temperature adjustments and maintenance scheduling can be automated, Perrin said.

Perrin also hopes that AI will help ease other challenges facing the trucking industry, such as the driver shortage, rising fuel and equipment costs, and supply chain issues.

"We're really talking about finding efficiencies," he said, "finding ways to do more with what we have to save some costs and create better incentives or better compensation for drivers so that it becomes a more attractive industry to bring more people into."

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