**Perdue Farms – Logistics Performance Review**

**The Case:**

Perdue Farms is a family-owned company heading into its second century of growth and innovation. With a goal of becoming the most trusted name in premium proteins, Perdue Farms creates products for consumers and for retail and foodservice customers around the globe, while changing the way animals are raised for food. Perdue Farms is a values-driven company looking for people who will help the company move into its second century as a leader in food and agribusiness. Perdue Farms proudly claims, “we are big enough to give you career experience; small enough for you to be noticed.”

The cost of transporting products to its customers are a significant part of the total logistics costs for Perdue Farms. Additional costs are incurred when a truck is held by the customer for an excessive amount of time while making a delivery. Held deliveries can happen for various reasons caused at the customer site: multiple deliveries arriving at once, a lack of warehouse staff, and inefficient warehouse systems all can result in unloading delays for trucks and drivers. On average, it costs Perdue Foods $65 per hour in wages and opportunity cost when a driver is held during a delivery. Furthermore, held deliveries may cause drivers to be late for deliveries to subsequent customers, reducing on-time performance. On-time performance is based on whether the driver arrived before or up to 30 minutes after their scheduled arrival date and time. If the driver is late to the customer, the on-time performance decreases.

One way to reduce this cost is to utilize “drop trailers” at a customer’s location. With a drop trailer, a delivery is brought to the customer and the trailer is parked in the customer’s yard for the customer to unload at their convenience. The driver then picks up the trailer from the previous delivery and departs. Utilizing drop trailers can reduce the time spent at the customer’s location to an hour or less. Perdue Farms would like your help in understanding which customers will benefit the most from “drop trailers”.

You must answer all questions in your analysis using the accompanying datasets, which come from three sources listed below. Keep in mind, the field “shipment number” in one dataset may not appear in all datasets. It is your job to clean the data set appropriately and use the data dictionary to help you identify all the fields.

* Transportation Management Shipment History (TMS Data) – this dataset shows the Who, When, and Where of a shipment
* Financial Reporting (Delivery Cost)– this dataset shows the costs of the shipments
* Delivery Performance Scorecard (On Time, Held Time) – this dataset shows the on-time performance and any delay time at delivery for the shipments

**Assumptions:**

* Perdue driver held time cost per hour - $65
* Drop trailer daily cost - $25
* When using a drop trailer, held time is reduced to 1 hour

**Parameters:**

* Drop trailers are only used on shipments where Perdue is the carrier
* Drop trailers can be used only for shipments where the number of stops is 1

**Questions:**

Based on your analysis of the transaction data, Perdue Farms would like you to address the following questions:

1. Which customers would offer the greatest savings by using a drop trailer?
2. What are the top 10 customers with the highest per pound delivery cost?
3. Which 10 customers had the highest incidence of held time?
   1. Number of occurrences
   2. Percent of deliveries
   3. Overall cost of occurrences
4. Which 10 customers had the most held time?
   1. Total hours
   2. Hours per delivery
5. What are the top 10 customers in held time cost per pound?