Autonomous Truck Platooning

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Sugarbeet production across the nation



State	Planted Acres
Minnesota	420,000
North Dakota	214,000
Idaho	167,000
Michigan	144,000
Nebraska	46,100
Montana	42,900
Wyoming	32,100
Colorado	29,400
California	24,800
Oregon	9,100
Washington	1,800









Minn-Dak at a Glance...



- We were the nation's first Grower-Owned Coop
 Established in 1972 50 'sweet' years!
- Shareholders = 484 Individuals
- Growers = 300 Farms
- 2024 Total Acreage = 94,500 acres
- Produce roughly 10% of the nation's sugar supply



Rehaul Fleet...

- Sugarbeet Transport
 - Small trucking company
- Fleet of 14 trucks
 - Receiving Station to Factory
 - Trailers 'bridged' to maximize payload
 - Supplement with Rentals during peak
- 4 'Yard' Trucks
- Mechanics on staff 24/7
 - Outside work
- Schedulers/Dispatch
 - > 60 Drivers currently on Payroll
 - Autonomous Trucks



Quick Fact

Our Rehaul Fleet collectively accumulates enough miles in a single season to circumnavigate the earth nearly 100 times...

Driverless Truck Deployment



Kratos Defense has partnered with various Agriculture Industry companies to deploy driverless trucks in niché short-haul Agriculture and Energy Supply Chain Operational Scenarios

The driverless truck technology will be similar to the ATMA deployment using a Platooning Leader/Follower technology with a single human-driven lead vehicle and a single driverless follower.

- Platooning Leader/Follower configuration
- Manned and Unmanned capable
- System Redundancy
- Advanced Active Safety System
- Retrofit "bolt-on" kit
- Requires no modification to infrastructure





Primary Objective



The overall objective for deploying driverless trucks to the specialty Ag and Energy Supply Chains is to augment the limited labor pool and enhance safety and hauling productivity.

- Deployed as needed and increasing safety through:
 - > Reduced risk of driver fatigue
 - Reduced risk of over-weighting trucks
 - > Reduced risk of speeding and other traffic violations
 - > Reduced stress of all involved because a driverless option is now available

Our goal is <u>NOT</u> to eliminate the driver, but rather to offer an option when qualified drivers are not available



Pilot Deployment Route 1



Desired pilot deployment for transporting Sugarbeets between piling locations and the granulated sugar processing plant in Wahpeton ND

- Operational Scenario 1
 - Non-Hazmat material
 - > Less than 50 miles round trip
 - > Using Minn-Dak harvest trucks
 - > Platooning Leader/Follower Configuration (1 Leader and 1 Follower)
 - Minimum vehicle spacing 150ft
 - > 24/7 Year Round operation





Pilot Deployment Route 2



- Operational Scenario 2
 - Non-Hazmat material
 - > Less than 50 miles round trip
 - > Using Minn-Dak harvest trucks
 - Platooning Leader/Follower
 Configuration (1 Leader and 1 Follower)
 - > Minimum vehicle spacing 150ft
 - > 24/7 Year Round operation





Installation – Minn-Dak Tractors

























