

Truck Traffic Management

DAKOTA PLAINS UTILIZES COMPUWEIGH SMARTTRUCK SYSTEM IN UNIQUE WAYS

A little over a decade ago, when **Dakota Plains Ag Center LLC** built its rail terminal, the joint venture's planners were savvy enough to locate the facility more than five miles from the nearest town of Parkston, SD. Being outside of town means there are no long harvesttime truck lines blocking access to in-town homes and businesses.

Operations Manager **Kevin Murtha** says the company utilizes a four-lane receiving traffic management system to help manage the 700+ trucks it receives each day during harvest. "Three of our lanes correspond to our three grain receiving pits and are for incoming commodities," he says, "The fourth lane is for transfers from our satellite elevators or trucks delivering or picking up fertilizer."

All of that is under the control of **SmartTruck** automated truck weighing system purchased from **CompuWeigh Corp.**, Cheshire, CT (203-262-9400),



Trucker is weighed on an inbound scale and awaits assignment to a receiving pit through a CompuWeigh SmartChoice module at Dakota Plains Ag Center near Parkston, SD. Photos by Ed Zdrojewski.



Operations Manager Kevin Murtha demonstrates one of the temporary RFID cards available for truckers delivering grain, ultimately a money-saving measure.

and installed in 2011 as part of a larger storage and handling expansion project (see page 28).

SmartTruck manages traffic through a combination of long-range RFID tags, outside message boards, electronic photo eyes, video surveillance camera, outdoor ticket printers, and a powerful computer system customized to the elevator's specific needs, which interfaces to an AGRIS accounting system.

Dakota Plains is far from the first grain operation to make use of SmartTruck for traffic control, but Murtha comments that this system has some unique, custom-designed features that make SmartTruck the logic choice for automation of the grain receiving process.

"We were in the process of automating our scales, anyway, and I saw an article on SmartTruck in a trade publication," he says. "We ended up going further with this system than we ever expected, but it's making life easier for both us and our customers."

Lane Management

At most facilities where SmartTruck is in place, permanent RFID cards are issued to each truck. The card then is tied to the truck and provides information elevator personnel can utilize to track the progress of the vehicle and load through the property.

Dakota Plains came up with a different way of handling this. Instead of issuing permanent RFID cards to drivers, the company placed containers full of temporary RF cards at the entrance drive. This allows transient trucks, which may never or seldom return to Dakota Plains to be issued an RF tag. These tags then are collected prior to the truck leaving the facility through the use of SmartCard RF collector positioned next to the OTP-4600 outdoor ticket printer. Drivers are required to insert their temporary RF tag into the SmartCard collector prior to be printed a scale ticket.

From there, drivers proceed to the inbound scale, which is equipped with dual CR Manufacturing, Inc. truck probes.



Driver picks up a scale ticket from a SmartCard printer adjacent to the outbound scale prior to departing the Dakota Plains facility.

Using two probes for sampling saves about 20 seconds per truck, Murtha notes, which can add up on a busy harvest day.

After the grain sample is tested,

CompuWeigh's SmartChoice module assigns a receiving pit automatically based on current pit rules, which can be adjusted or overridden throughout the

day. A SmartView message board at the scale directs the driver to the correct pit.

As the truck pulls forward and heads to the pits, a SmartLane dump pit traffic control module tracks trucks to make sure they remain in the correct lane. Utilizing the SmartPit dump pit verification module, if a truck drifts out of the correct lane or heads to the wrong pit, an alarm sounds and a Dakota Plains employee directs the driver back to the correct lane. This eliminates the chance of bin contamination.

If an excessive number of trucks causes a backup at any one pit, SmartPit and SmartLane work together to ensure the traffic flow remains consistent and, more importantly, accurate.

Once the driver unloads grain, the truck proceeds to a new Fairbanks Type S 120-foot pit-type outbound scale, where the driver receives a scale ticket from the OTP-4600 outdoor ticket printer.

"Before we installed the new system in 2011, a driver might wait four to six hours to unload during the middle of harvest," Murtha says. "Now it's less than an hour."

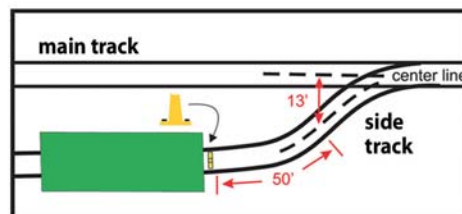
Ed Zdrojewski, editor

DON'T FOUL THE SWITCH!



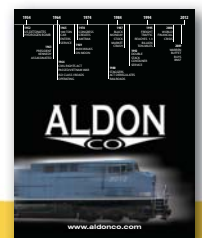
For exposed rail track. Flexible cone is 10" high above tie. Secured by two lag screws. Bends easily if struck and springs right back.

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