Managing IP Grain

COMPUWEIGH GMS SOFTWARE KEEPS CALIFORNIA HANDLER ON TRACK

Adam's Grain Co.'s 5-million-bushel Road 102 grain elevator in Woodland, CA, includes a large flat storage building and receives and ships grain by truck. Photos by Ed Zdrojewski.

Adams Grain Co., Arbuckle, CA (530-476-2000), occupies a unique niche in California's Sacramento Valley.

"Some 99% of the grain we handle is locally grown," says Grain Manager **Dan McElligott**, "and we segregate all of it by varieties. Everything is identity-preserved (IP)."

Operations Manager Tom Christison

That's a tall order, given that Adams Grain operates eight grain facilities, with 10 million bushels worth of licensed storage space, and handles some 12 million bushels of grains and oilseeds per year.

"Corn and wheat are our two biggest crops, and we also handle significant amounts of safflower, milo, and barley," says McElligott. "All of our corn goes to domestic markets for feed, food, and industrial uses, and our customers have their own specifications on variety and grade factors. Our wheat is either milled domestically or exported, and we segregate that on factors such as protein, moisture, and falling number. Also, we have to segregate hard red winter wheat from durum, hard white, dark northern spring, and soft white wheat."

Compatibility Challenge

Tracking all of those IP bushels is dauntingly complex, which is the reason that Adams Grain developed its own in-house grain accounting software during the 1990s. For the next step in automation, the company purchased a scale management software package in 2000, to record weights and grades on inbound and outbound grain and produce settlements by interfacing with the grain accounting software.

The problem here, according to Operations Manager **Tom Christison**, is that the scale management software was written specifically for that vendor's own grain accounting software and was not entirely compatible with Adams Grains' system, which created bottlenecks.

"The scale software created a text file that we could never drop into our grain accounting system," Christison explains. "As a result, at harvest, we would have a person working 12 hours a day just re-entering data."

Thus, in May 2003, Adams Grain switched to a **GMS 4000** grain management system from **CompuWeigh Corp.**, Cheshire, CT (203-699-9000). Christison says company managers had read about the software package in various issues of *Grain Journal*, and the biggest selling point for Adams Grain was CompuWeigh's ability to custom-design its GMS 4000 package to interface with the company's in-house grain accounting system.

"We like that the GMS 4000 works on the Windows 2000 operating sys-

Adams Grain Co.'s 1.2-million-bushel 1030 East elevator in Woodland, CA, is a rail receiving and loading facility.

Weighmaster Alma Ramirez (photo at left) and Grain Grader April Sandoval both utilize the CompuWeigh GMS 4000 system to record weights and grades for incoming grain at the Road 102 elevator.

An incoming truckload of grain at the Road 102 elevator is sampled with a CR Mfg. Shuttle grain probe prior to weighing.

by a **CR Mfg. Shuttle grain probe** and pneumatically transferred to an on-site grading laboratory. The truck then proceeds to the facility's truck scale.

The weighmaster enters the truck's identification number and the commodity it is carrying into the GMS 4000 system. The software records the weight of the truck and its load. Meanwhile, the grain grader inputs the official grade and other relevant factors into the system.

The weighmaster can send the truck to one of several receiving pits at Road 102 and routes the grain to a specific storage bin or to a large flat storage building, or alternatively, can send

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tem," Christison comments. "It's very straightforward on data entry. And everything fits on one computer screen, where it took two screens with our old system."

Inbound Grain

Adams Grain currently has GMS 4000 workstations installed at five of its eight California locations – two grain elevators in Woodland and one each in Dixon, Goshen, and Famoso.

As an example of how the system works, the weighmaster at Adams Grain's Road 102 elevator at the east end of Woodland operates two truck scales from a CompuWeigh workstation but can forward data to any of the workstations at the five GMS 4000 locations or to Adams Grain's accounting system at the headquarters in Arbuckle.

A truck delivering a load of grain to the Road 102 elevator first proceeds to a probe station, where a sample is taken

Rail unloading and loadout station at the 1030 East elevator is set up for both origin and destination weights, utilizing a bulk weigh loadout scale outfitted with CompuWeigh GMS 4000 software. Bright yellow overhead trolley unit from Fall Protection Systems protects workers atop railcars.

the truck to another Adams Grain elevator. Since all of the GMS 4000 workstations are linked via a Wide-Area Network, data can be forwarded to any other workstation.

In addition, every five minutes, the GMS 4000 system automatically downloads all new data to the company's grain accounting system, for tracking and settlement.

After unloading, the truck returns to the scale, where the tare weight is recorded, and that data also enters the GMS 4000 system.

Adams Grain operates a password-protected web site where growers can look up their unloads for the day and track weights and grades by field. This web site also is updated automatically with data from the GMS 4000 system.

Outgoing Shipments

The GMS 4000 also tracks outbound grain shipments. At the Road 102 elevator, which ships grain out via truck, an empty truck first weighs in, then picks up its load and weighs out. Again, the weighmaster enters the truck ID number, and the GMS system records the commodity, weight, trucking company, and end use customer.

"If I have a problem at 6 a.m., they're already in the office on the East Coast, and they can make a fix before we start up for the day at 7 a.m."

-Tom Christison, operations manager

Adams Grain loads and unloads railcars at a concrete elevator across town adjacent to the California Northern Railroad, a short-line connecting to the Union Pacific at Davis, CA. The facility uses an existing bulk weigh scale that operates at 100 to 125 tons per hour.

For loading railcars, the operator inputs the railcar number, and the GMS 4000 system determines the car's weight limit from its database. (CompuWeigh offers a railcar tag reader for automatically inputting this data, but Adams Grain opted not to install it.) The GMS 4000 then directs the bulk weigh scale to load the pretermined weight onto the railcar and generates a weight certificate. This, too, is downloaded into the grain accounting system every five minutes.

"We like the system a lot," Christison comments. "We were a little skeptical about their technical support, because they are in Connecticut, but they've been very good on troubleshooting. If I have a problem at 6 a.m., they're already in the office on the East Coast, and they can make a fix before we start up for the day at 7 a.m."

Ed Zdrojewski, editor