

**LUBBOCK ELECTRIC COMPANY'S EAGL.SYS® COTTON MODULE TRACKING SYSTEM:  
HISTORY, EVOLUTION, FUTURE**

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**Abstract**

EAGL.SYS® (Electronic Accumulating Gin Ledger System) is a system of software for the office and hardware for the gin widely used in west Texas. The initial product was a simple means to transmit bale weights, seed weights, and bale numbers from the press in the gin to the office in the late 1980's. The system has been expanded to include customer account numbers, load numbers, load gross weights, truck tare weights, seed varieties, etc. The software began as a MS DOS program, and is currently Windows-based. A Beta version is being tested this year, which will be a web-based program. Future enhancements include smart phone apps, GPS tracking, and remote monitoring by individual customers.

**Introduction**

**The Beginning**

In the 1980's, a product named "Record-A-Bale" was installed in a west Texas gin. It consisted of an IBM typewriter in the gin office and a ten-key pad in the gin connected by a multi-conductor underground cable. As each bale came out of the press, the operator would key in the bale number, a space, the bale weight, a space, the seed weight, and a carriage return, which ended that transmission. From there, Lubbock Electric Co. (LECO) personnel began devising a simple means to automatically collect the bale and seed weights, match them with the appropriate bale number, and transfer that information to the office electronically. At the test site, a programmable logic controller in the gin used a counter to keep track of the bale number, an analog signal to get the bale weight from the scale head, and a contact closure from a mechanical scale tracked the seed. From that rough beginning, the present product has emerged.

**The Present**

Presently, the system consists of one PLC/PC console in the gin networked to at least one PC in the office running the EAGL.SYS application. The office PC is pre-loaded with all of the customer information. The module tracking starts as each farm is harvested. When the modules are phoned in, the attendant in the gin office selects the account and enters the number of modules in the "Call-In" screen. The software assigns a Scale Ticket Number, and tells the attendant the next Load Numbers to assign to those modules. When the trucks deliver a module to the gin, its number is logged in with its weight in the "Weigh-In" screen. A ginning list is generated from the modules on the yard for the ginner. As each new load is started, the ginner or press operator scans its number. The seed and bale scales record the weights with the bale number. As each bale exits the press, the system increments to the next number. As soon as the customer's Scale Ticket is complete, the software puts it into the proper format to transmit to the gin's marketing entity.

**The Future**

A web-based version of EAGL.SYS is being Beta-tested at an area gin. Currently, plans are to develop a mobile app which could let individual customers text in their harvested cotton and track it through the system. Other developments could include automatic location-capture from smart phones, GPS mapping for the truck drivers, and more efficient yard utilization and tracking.

**Summary**

With EAGL.SYS there is no need to have a scale clerk or a night clerk. One person per shift can efficiently handle even the busiest of gins with EAGL.SYS. Furthermore, manually figuring turnouts or inputting file transfer data is not required, eliminating needless labor and preventing manual keying errors. The system has built-in management reports, including a configurable production report that can analyze individual shifts, days, weeks, or months. A timer on the press rotation can trigger a downtime logger that tracks the number of occurrences and the time for each. Built-in programming can alarm on over or under-size bales, excess seed to lint weights, missing bale

numbers, out-of-sequence bale numbers, etc. If the built-in reporting isn't enough information, there is also a totally-configurable custom report generator.