

Plains Cotton Cooperative Association

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The following information was adapted from an address by C.L. Boggs, General Manager of Plains Cotton Cooperative Association, at the 1980 National Symposium on Electronic Marketing of Agricultural Commodities in Dallas, Tx.



**PCCA General Manager C.L. Boggs and one of his management aids,
a Telcot terminal.**

Telcot From Concept To Commercialization

Plains Cotton Cooperative Association (Plains) exists to help the 20,000-plus cotton producers who are its members in Texas and Oklahoma to achieve the best competitive price for their cotton. We serve this large number of producers through 190 different community focal points, their gin offices.

Today Telcot is our means to that end.

To accomplish this end, we also have to make our Telcot system attractive to a large number of buyers.

For us, Telcot best fits the times, the types of cotton produced in Texas and Oklahoma, and the way producers have sold their cotton over the years.

Other modes of marketing cotton—such as pooling and direct selling to textile mills—continue successfully. But the concept of a centralized clearing house to swiftly and efficiently acquire our members' cotton, and then re-offer it simultaneously to a large number of merchants for competitive bidding, is a popular extension of the way cotton producers have traded their cotton for decades in the Southwest. What we have done is to widen the pathway, straighten its course and pave the chuckholes to and from a centralized market center. Put another way, we have improved the traditional interface between the producer and the market.

Why Telcot Was Developed

Telcot wasn't dreamed up overnight.

It isn't the product of a long-short exploration into which large sums of money were suddenly invested to adapt space-age technology to commodity trading.

It's been expensive to develop.

Its popularity has swiftly spread.

But its synthesis wasn't sudden.

Telcot was given commercial birth in 1975; however, only Dan Davis, our former manager, knows the length of its gestation. It was Dan,

with over two decades of experience at using innovative merchandising practices to fit the times while he managed Plains, who conceived Telcot and was bold enough to phase it into reality at a time when adaptive technology was still somewhat on trial.

Telcot probably was on the drawing board of his mind at least five years prior to its implementation. Those who worked closely with him also realized there had to be a better way, particularly during the decade of the 70's when Plains' major "hedging" device—the Commodity Credit Corporation (CCC) loan—became less effective for the association's marketing model. This is stated neither to defend nor to criticize the high loan era of the 1950's and 1960's. Save it to say, Plains had little room in which to operate between the loan level and the market price, but the loan did provide a safe floor for our operations.

Given the circumstances of the high loan era, Plains forged a number of innovative practices that benefited the Southwest marketing picture for cotton. It handled nearly 15-million bales during the 22 years that preceded Telcot's implementation.

In spite of the best efforts in the pre-Telcot period, however, cotton producers in the Southwest didn't have the means to plot a selling strategy to fully expose their cotton to a large number of buyers in a highly competitive market situation. Traditionally, many growers had only a small handful of buyers as their market and approached them with a "what-will-you-give-me" entreaty.

They had to rely on a slow and time-consuming manual recapping of their cotton qualities before even being ready to approach a buyer. Principally this process was a gin clerk with an adding machine, who figured the recap and then used the telephone to contact potential buyers. Information was relayed back and forth between



Congressman Charles Rose (N.C.) follows Texas-Oklahoma marketing activity on a Telcot "tube"

producer and prospective buyer until a sale was made or the offer rejected. Oftentimes the producer and the buyer couldn't get together on price, and a few days later, or perhaps only a few hours later, the process was repeated.

Plains was a major part of the marketing scene through all of this, but those were difficult years. Many producers checked outside prices with our price advance and allowed us to handle their cotton only when Plains' bid was the highest. This made it extremely difficult to show sufficient margins to pay the overhead.

With the government's market-oriented thrust of the early 1970's, Plains was forced to borrow much larger sums of capital to finance smaller volumes of cotton, and its risk positions increased to perilous proportions.

How Telcot Was Developed

The 1960's was a period of major innovations for Plains. As an example, our services were extended into the Rolling Plains of Texas and Southwestern Oklahoma and we built warehouse-compress facilities in both those areas; we further extended our marketing services to South Texas; developed the fiber laboratory in Lubbock; and expanded our use of electronic data processing.

We continued to enhance our data processing capabilities which allowed us to handle comprehensive data more efficiently and to provide greater flexibility in our marketing approach.

By 1974, having stayed up with new generation data processing equipment, Plains was using CRT (cathode ray tube) terminals "inhouse" to call up current price data from the computer on members' cotton. This information was relayed to the gins as they called in for cotton prices via inbound WATS telephone lines.

This was a far superior program to those Plains had used in the past. But it had the same shortcomings of the past since producers still received only the price that Plains was willing to bid for the cotton, with many of them "shopping" our price advance for a higher price.

For the 1975 season, we implemented the initial birth of Telcot that saw the installation of

buyer terminals in the offices of 15 cotton buyers in Lubbock, Dallas and Memphis, Tennessee. These terminals, CRT units and printers, were leased to the buyers at our cost.

A courier service nightly picked up from the gin offices producer account information, along with class card data describing the U.S.D.A. quality classification of each bale, and this data was encoded in our computer installation in Lubbock. These courier vehicles drive approximately 8,000 miles each night, an expensive operation. The day is welcome when Telcot enhancements, and the marvels of electronics, will allow the elimination of this costly practice.

Whenever we wished to offer a producer's cotton to the buyers on the network, this information was flashed simultaneously to all terminals. The buyers monitored terminals in their offices and bid on the cotton on a "blind bid basis." The bidding closed after 15 minutes, and the cotton was sold to the highest bidder, providing his price was above a pre-determined minimum. This 15-minute bidding system is called "regular offer" option.

Approximately 230,000 bales traded in the 1975-1976 season, Telcot's initial year.

Further Growth of Telcot

Unsurprisingly, Telcot business in the initial year was not sufficient to cover expenses but the feedback was encouraging and our confidence strengthened. Plains knew it had the makings of a winner.

Among the lessons learned more conclusively was in the data processing area. Our IBM 360 computer wasn't flexible enough to make the progress needed in order to reach higher volumes and help lower the high per-unit fixed costs of Telcot.

Telcot was plagued that first season with an assortment of hardware problems, programming difficulties, and some bad luck involving "Murphy's Law." With approval of Plains' Board of Directors, we entered into the IBM 370 series with a model 145 computer to start the 1976 season. The buyer network was increased to 25 offices and 15 terminals were installed in gin offices, while the balance of our

producers were served via the inbound WATS service.

The installation of terminals in the gin offices has been the most important single step in the grower acceptance of Telcot. For the first time he could "see the market" as it happened—thus the phrase "The Window of the Market Place" that is often used to characterize Telcot.

There was difficulty in mastering the new computer, coupled with further bad luck when an early freeze got the crop ready for harvest 30 days ahead of our timetable. But we completed the season in fairly good order, learned a good deal more about electronic marketing, and wound up handling 380,000 bales. Still not enough to cover expenses, but our confidence and experience grew higher.

In the 1977 season, the buyer network was enlarged to 30 offices and the gin office units increased to 75. The "firm offer" option was offered. This allowed Plains to offer members' cotton over the buyer network at a firm asking price, similar to a limit sale order in the stock market. In this program, an offer remains outstanding until someone buys it or we withdraw it. The cotton is sold to the first buyer who meets the offer price. We continued to offer the "Regular" option (the 15-minute bidding), but "Firm Offer" became far and away the most popular option among both our members and the buyers. The "Catalog" of Firm Offer cotton often exceeded 120,000 bales (over \$30 million on today's market) in the following year, the 1978-79 season. Buyers could buy large volumes in a short period of time. In the 1979-80 season, for example, one buyer purchased over 25,000 bales in one day. Most of it was purchased within 3 hours. As for the 1977-78 season, we handled 840,000 bales and Telcot's popularity further surged.

Knowing we now had a revolutionary and yet masterful new dimension in marketing, we began time-tabling enhancements to Telcot that will be touched on in the concluding part of this report.

After the 1977-78 season, we could readily see the growing popularity of Telcot and knew we had to have a higher capacity electronic system.

Again Plains' Board gave approval to replace the IBM 370-145 computer with the model 3031, also of the IBM 370 series. This computer is presently in use.

Development Of CXS

Plains serves only the farmer-owned cooperative sector of the Southwest cotton industry—perhaps slightly more than one-third of the cotton produced in its trade territory.

In May, 1978, after 22 years at Plains, Dan Davis decided to venture onto his own and develop an electronic service for those areas not served by Plains, and formed Commodity Exchange Services (CXS). With the approval of Plains' Board, we entered into a test project with CXS to see whether a facility-sharing arrangement might be workable, jointly using the same computer, telephone lines and buyer terminals with CXS in order to lower the "overall" per bale cost.

During the 1978 season, Plains further expanded the buyer network and increased the number of gin terminals. CXS experimented in serving 10 gins, supported on a time sharing, leased basis by our computer, telephone lines and buyer network.

We ended the 1978 season with volume handled at 880,000 bales.

Prior to the 1979 season, the Plains' Board decided that our experiment with CXS was workable and we entered into a facility-sharing agreement. From all accounts it appears to be benefiting both businesses and has expanded Telcot's coverage into sectors we otherwise would not be serving. The joint business is good for Plains' financial statement, and we assume for CXS, in financing Telcot. Also, it provides a broader market base for all users.

Telcot Today

Telcot's buyer network has been expanded to over 40 offices that comprise 90% or more of the buying market for our cotton, and Telcot terminals are in nearly 270 gin offices, including those served by CXS. Telcot had traded above 1.5 million bales in volume from the 1979-80 crop as of Spring 1980.



Telcot's heart is an IBM 370 series, Model 3031 Central Processing Unit (3 megabyte) complemented by IBM 3350 disk drives (12 spindles) and a 3705 Communications Control Unit (½ megabyte). The system supports approximately 750 batch programs and some 250 on-line programs.

We believe Telcot is a solid success by any measure. It is difficult to pinpoint its impact on pricing, but Telcot has become the most quoted standard of pricing in our part of the country.

Telcot's marketing options—including crop contracting as well as the regular and firm offer options—provide great flexibility in dealing with the market on a current and forward basis.

Acreage crop contracting is a process whereby a buyer and a seller agree on the price for the cotton production from those acres prior to its harvest, sometimes even prior to its planting.

For some time now, we have been contracting cotton acreage for the 1980 season that is still to be planted. We have further expanded our contracting program and it is now more flexible than in the past.

Another popular Telcot service is the Loan Advance Program. Producers can tender their cotton to Plains during a depressed market and receive an interim cash advance equal to the CCC loan price. When the market is right, Plains then offers the cotton over Telcot to obtain the best price available from the buyers, or we may sell it to our own mill customers. In this way the producer has available an immediate cash advance to help meet his short-term financial commitments, and his cotton is not sold when the market is depressed. When the cotton is sold, Plains repays the CCC loan, plus interest, and a valuable function of marketing our members' cotton has been performed. Over 300,000 bales of the 1978 crop was marketed through this Loan Advance Program.

Buyers have come to like the Telcot concept and to respect its integrity. Our buyer network has grown steadily and that is the best evidence of their acceptance. Also, we have a way in which local buyers who are not on the network can participate in the bidding, matching their bids with those buyers on the network.

Unlimited Buyers

We often say that Telcot has over 40 buyer offices on the network, a most significant figure for the cotton trade, but the actual number of participating buyers is unlimited considering the many local buyers who compete but do not have terminals in their offices.

Buyers also like the fact that Telcot guarantees delivery of the cotton purchased, on invoices with accurate price calculations, and they don't need to leave their offices to conduct their buying function.

The producers like Telcot because through it Plains finds the best market for their cotton, and provides timely and accurate price information.

We report on the gin "tube" the results of each sale as it is made. Producers can watch the market right in their gin office as trading occurs. They no longer rely on the newspaper to know yesterday's market price or selling activity; they see it on the "tube" in the gin office as it happens. Yesterday's information often is of limited use in making today's market decisions.

Telcot furnishes growers commodity futures trading information on cotton and 5 other major agricultural commodities, plus a broad range of other commodity news through the "Comnet" news service, a veritable "electronic newspaper," also available on the tube.

In the research and development of Telcot, we have made enhancements to satisfy the needs of both seller and buyer. The producers wanted more flexibility in marketing options and greater market information; we provided it. Buyers wanted greater description of the cotton offered, the ability to buy large volumes faster and some finer points such as a running tally of their purchases; we provided it, and more.

Continuing with our timetable, Plains is now adding a system to maintain the complete accounting records for the gin offices, whereby they use their keyboards to access our computer and do their bookkeeping; soon we will add printers in the gins for greater flexibility.

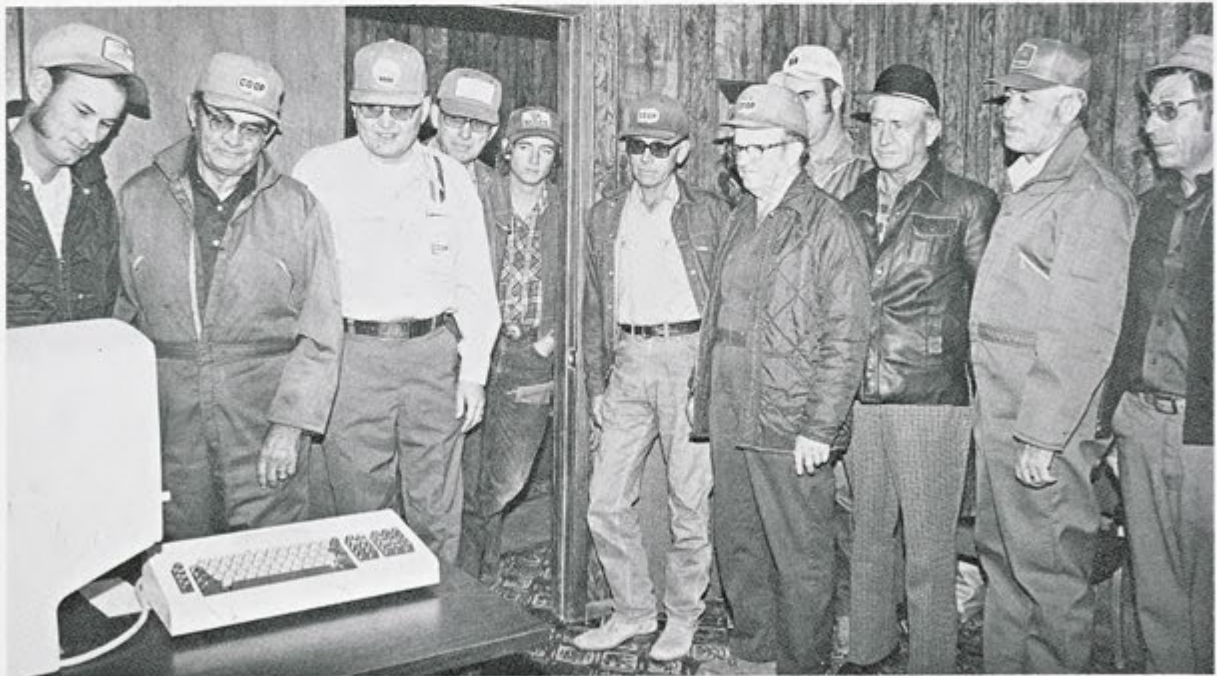
We are working with USDA in its use of electronic recording devices to give producers machine readable class cards. This enhances the entry of class card data into Telcot, thus reducing costs.

Additional services are envisioned for buyers who want them, such as inventory control, preparation of shipping orders and more information on crop conditions each year.

Plains will build on Telcot for a long time to come, knowing it can stand up under intensive



Producers can watch the trading activity of Texas-Oklahoma cotton as it occurs via a Telcot terminal in the gin office.



Recaps of the producers' cotton recaps are quickly displayed on the gin terminal screen, a far cry from the slow and time-consuming process of manual calculations that were in vogue until Telcot was introduced.

demand use. During December, 1979 and January, 1980, it traded over one-million bales, worth in excess of \$275 million, and set numerous daily trading records reaching regularly into the 30, 40 and 50,000-bale levels. On January 17, 1980, it attained an all-time single day's trading record of almost 54,000 bales.

Improvements can and must be made steadily, that much has been learned since 1975. We won't change for the sake of change, but we are ready to keep up with advancements that can provide greater cost-effective service to our members.

Telcot is our means to the end of helping our members achieve more competitive marketing.

Some 'Feeds' And 'Speeds' Of Telcot

The electronic equipment supporting Telcot today is the outgrowth of several migrations through computers and software packages dating to the early 1960's and more specifically to the early 1970's.

Telcot's heart is an IBM 370 series, Model 3031 Central Processing Unit (3 megabyte), complemented by IBM 3350 disk drives (12 spindles) and a 3705 Communications Control Unit (½ megabyte). This system supports approximately 750 batch programs and some 250 on-line programs in its array of services to users.

Data is transferred at speeds that are measured in nano-seconds (billionth seconds) and stored on disk files. We currently have storage capacity for 3.8 billion characters of information. The disk drives transfer the data to the computer at a rate of 1.2 million characters per second. Put another way, we could "read" the entire contents of the Bible into the computer in approximately 2 seconds, and store about 30 sets of the Encyclopedia Britannica on our disks. It requires about 2 seconds to send a cotton recap from Lubbock, Texas, to Memphis, Tennessee, a distance of about 800 land miles.

Feeding to and from the central site are over 300 terminals, principally IBM 3275 SNA video display units consisting of over 40 buyer offices and about 265 Plains-CXS gins. The buyer offices also have 3287-80 CPS printers. Additionally, we have about 40 local (inhouse) video display units.

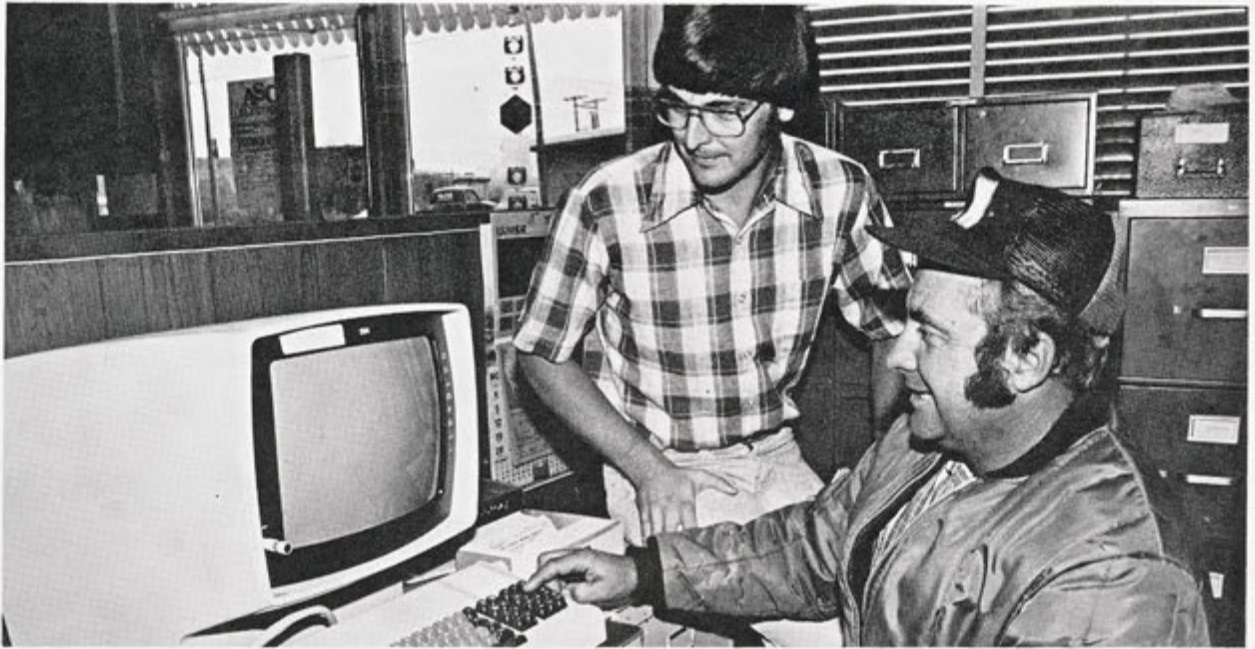
Data is carried to and from the users via leased telephone lines involving over 28 different telephone companies covering approximately 8,500 miles of telephone lines on 50 different circuits. Our longest gin circuit is 700 miles and the most remote buyer circuit is 2,100 miles in distance.

The users generate work for the computer in terms of transactions or requests. Each telephone circuit on our network, after conversion, transmits at 2,400 bits per second, or 300 characters per second, to and from the computer.

Our objective is to provide a 15-second response time on the users' video display terminal at least 75% of the time. Today a typical gin averages about 25 transactions per hour, 10 characters inbound, and 1,050 characters outbound. A typical buyer averages 45 transactions per hour, 10 characters inbound, and 1,350 characters outbound. The computer processes approximately four to five transactions per second or around 140,000 transactions per day.

Our strategy has been to rent terminal equipment to permit the flexibility to change as equipment technology changes. If advancements in these lines contribute to lower costs, we will look toward purchasing this equipment. We recently purchased our IBM 3031 computer. We are interested in seeing a transmission system that will accommodate faster data flow to and from country points and will also facilitate faster response times for the terminals. Modems are being incorporated to speed this flow but eventually there should be better transmission methods at lower costs.

There are several supplemental programs which enable Plains to more effectively service and monitor performance to Telcot users. Telcot has a set of network programs which enables it to put terminals and lines in and out of service, measure response time and retrieve error logs recorded in the terminals in order to do problem determination. There are a number of support programs that enable us to monitor the work being processed in the computer and control certain performance criteria within the system.



Installation of terminals in the gin offices was an important step in the grower acceptance of Telcot. For the first time producers could see the market as it happened—thus the phrase “The Window of the Market Place” that is used to characterize Telcot.



By checking the gin terminal, producers also can watch commodity futures trading information on cotton and several other major farm commodities, plus a broad range of other commodity news through “Comnet,” an electronic newspaper that is a part of the Telcot service.



Congressional and USDA officials have also visited PCCA's offices to inspect the new dimension in agricultural marketing as shown in this scene in C.L. Boggs' office at Lubbock.



Congressional committees also have a keen interest in Telcot. In 1979, the system was demonstrated for the House Agriculture Committee in a Washington reception. Above, Congressman Kent Hance (Tex.) discusses the system with C.L. Boggs (right), general manager of PCCA.



In addition to providing the Telcot service, PCCA also merchandises cotton throughout the world. Its headquarters are often visited by textile men from many countries. Above is a group of Spanish textile men being toured around Lubbock. Below is a group from Hungary.





PCCA, the farmer cooperative that developed and owns Telcot, serves over 20,000 producers in Texas and Oklahoma. The association's policies are set by a 191-man Board of Directors.





Plains Cotton Cooperative Association, referred to as PCCA or "Plains," is a farmer cooperative in the service of over 20,000 cotton producers in Texas and Oklahoma. With headquarters in Lubbock, Tx, it markets cotton to worldwide points and also provides a marketing service known as Telcot, an electronic system that began captivating the Southwest cotton industry in 1975.

In addition to its Lubbock headquarters, the association has offices at its compress divisions in Altus, Ok (Oklahoma Cooperative Compress Association) and Sweetwater, Tx (Rolling Plains Cooperative Compress), at Harlingen and Corpus Christi in South Texas, and operates a port facility at the Port of Galveston, Tx.

The association's policies are set by a 191-man Board of Directors. An 11-man Executive Committee representing the various districts of the Association is comprised of Board members.

Offices

Plains Cotton Cooperative Association, P.O. Box 2827, Lubbock, Tx 79408.
Telephone: (806) 763-8011. TELEX 9108964335, PLAINS LUBBOCK.

Rolling Plains Cooperative Compress, P.O. Box 197, Sweetwater, Tx 79556.
Telephone: (915) 236-6614.

Oklahoma Cooperative Compress Association, P.O. Box 918, Altus, Ok 73521.
Telephone: (405) 482-3227.

Plains Cotton Cooperative Association, P.O. Box 2148, Harlingen, Tx 78550.
Telephone: (512) 423-0261.

Plains Cotton Cooperative Association, P.O. Box 9015, Corpus Christi, Tx 78408. Telephone: (512) 884-6677.