COTTON GINNING, HANDLING, AND MARKETING
HIGH PLAINS REGION OF TEXAS AND NEW MEXICO

Dale L. Shaw, Don E. Ethridge
and W. C. McArthur

February 1978

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Introduction

The High Plains of Texas and New Mexico is a major cotton area. In 1974, the area accounted for 20 percent of the total acreage planted to cotton, 11 percent of the production, and 13 percent of the active gins in the United States. The High Plains encompasses 25 counties in West Texas and four counties in Eastern New Mexico. For this report and related work, the region is divided into five production areas based on irrigation, cropping patterns, and cotton yields; that is, the Northern, Western, Central, Southern, and Southwestern areas (figure 1). The same area designations are used to summarize the number and capacity of ginning and warehousing facilities.

Cotton acreage and production varies considerably from year to year, especially in the Southern area where less than 30 percent of the acreage is irrigated and in the Northern and Western areas on account of cool summer temperatures and early frost.

Module seed cotton storage and handling has increased rapidly in the High Plains as well as the installation of module feeders, universal density presses, and mechanical samplers at gins. Rick storage is a common practice in some communities, especially during large crop years.

1/ Agricultural Economists, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture, Shaw and Ethridge are stationed at Texas Tech University, Lubbock, Texas; McArthur at the University of Georgia, Athens, Georgia.
Figure 1.
Several varieties of short staple, storm-proof, stripper harvested cotton are produced in the region. High Plains cotton typically averages Strict-Low-Middling grade, short staple (31/32 inch), and low micronaire (averaging 3.2 or lower for four of the six years from 1970 through 1975). Typically, 60 to 70 percent is exported, and that portion of the cotton used domestically is usually made into low count yarns.

Producers market baled lint through a cooperative marketing association, local buyers, shippers, f.o.b. merchants, spot brokers, mill buyers, and/or forward contracts based on "green card" values. Inter-merchant trading takes place usually on the "green card" basis. Sales to domestic and export mill buyers are usually on specifications in addition to "green card" values.

Seed Cotton Handling and Ginning

Harvesting and Handling Seed Cotton

Most cotton in the High Plains is harvested by machine stripping; only three small local areas utilize custom harvesters from outside the High Plains regions to spindle pick a limited acreage of Acala cotton. Typically 2,200 pounds of machine stripped seed cotton are required to yield a 500 pound bale of lint and 800 pounds of cottonseed. This amount includes about 900 pounds of burrs, stems and other trash. In poor crop years such as 1971 and 1975, nearly 3,000 pounds of machine stripped seed cotton were required per bale of lint produced. Spindle picked cotton typically yields a 500 pound bale of lint from 1,500 pounds of seed cotton because of the lower trash content.

Historically, cotton producers in the High Plains have assumed responsibility for transporting seed cotton from farm to gin. In recent years, however, many gins have undertaken all or part of this function as a competitive device to assure themselves of a stable or large share of the available crop. Some gins own all trailers and tow the trailers both ways between farm and
gin; others own a few trailers which they loan to producers as needed or available. Many gins give rebates of $1.00 to $2.50 per bale to growers who provide their own trailers. A few gins have a lower ginning charge for cotton delivered in producer-owned trailers compared with gin-owned trailers.

About 33 percent of the gins owned an average of 100 trailers per gin which amounted to 1.5 trailers per customer in 1974. The rapid adoption of module handling and storage of seed cotton by producers and ginners since 1972 has resulted in some gins and producers selling all or most of their trailers and also in fewer purchases of new trailers. Many gins have purchased or leased module builders, palletless module mover trucks ($60,000 each), and other module and rick handling equipment. Nearly all gins have some producers using the module handling system. A few gins processed over 90 percent of their volume from modules during the 1976 and 1977 harvest. About 20 percent of the gins had invested an average of $100,000 each by 1977 in some type of module or rick unloading and/or feeding system at their gins. The High Plains region leads the nation in adoption of module handling, storage and feeding systems.

The adoption of module and rick seed cotton handling and storage systems on the High Plains has resulted in many equipment ownership patterns, operating methods and procedures for recovering operating and ownership costs. Some gins purchase module builders and rickers which are loaned to growers who store seed cotton on the farm and then deliver it to the gin at a time other than the peak of the harvest season. Some gins pick up module or rick stored cotton and haul it to the gin free of charge. Others assess a charge per module or per bale of cotton. Some charges are related to distance to the gin; others are not. On the High Plains, module handling and storage has increased much faster than rick storage. The trend is for ricks to be used
as an overflow system, with cotton being placed in rick storage only when trailers are not available causing harvesting delays. On the other hand, module handling and storage tends to replace conventional trailers as the primary system for individual producers and gins.

Module handling and storage has increased most rapidly in the Southern and Southwestern High Plains and least rapidly in the Northern area. The areas with sandy soils and relatively more dryland production experience large variations in annual production. Module handling provides considerable flexibility for these conditions, allowing harvesting to proceed at a much faster rate than ginning especially in years with high yields and large acreages.

The older trailers in use on the High Plains hold about three bales of machine stripped cotton; newer trailers have capacities up to six bales. Trailer usage or trips to the gin varies considerably from gin to gin and year to year. Detailed records on a large number of trailers at six gins during the 1964-69 seasons show that the average number of trips to the gin ranges from two to seven per trailer per season, with an overall average of about four trips, or a total of 12 bales for a three-bale trailer. 2/ This same study indicated that trailers were used 40 percent for assembly and 60 percent for temporary seed cotton storage at the gins. A 1971 study indicated that on the average a trailer hauled 23 bales of seed cotton to the gin annually. 3/


Most growers on the High Plains are located within ten miles of two or more gins. Much of the cotton is grown within a five mile distance of a gin. The average haul distance is about five to ten miles with relatively little cotton being hauled over 40 miles to a gin. Often cotton is hauled past one or more gins to be processed at a more distant gin because of grower preference, gin ownership, speed in which empty trailers can be returned, and other services provided. It is not uncommon for a producer to gin at several different gins, particularly those growers with widely scattered farming operations.

Most communities in the concentrated production areas have a cooperative, independent, and line company gin side by side or across the road from each other. It is common to have up to five separate gin operations in the same town. Seventeen of the 29 High Plains counties had 10 or more active gins and only eight counties had three or less active gins in 1974.

Ginning Charges and Practices

Typical ginning charges during the 1974 and 1975 season were $1.00 to $1.50 per hundred pounds of seed cotton. Some gins make a per hundredweight charge for all services rendered while others make lower per hundredweight charges for ginning with additional per bale fees for bagging and ties, insurance, transportation to warehouse, National Cotton Council dues, Plains Cotton Growers dues, Texas Cotton Ginners Association dues, picking up ricked or moduled cotton and so forth. The trend is for more and more gins to make a per hundredweight charge including bagging and ties. Fewer gins are assessing separate charges for bagging and ties.

Some gins occasionally follow the practice of "ginning for the seed," that is, the gin receives the seed from a bale in exchange for all ginning
charges. This practice tends to occur more often in years of low cotton production and/or low cottonseed prices as a competitive device. Gins normally purchase the cottonseed from producers and resell to cottonseed oil mills.

The producer's choice of gin or gins to use for his cotton generally determines the warehouse and other marketing channels for his baled lint and cottonseed. Seed from cooperative gins goes to Plains Cooperative Oil Mill (FCOM) Lubbock or to West Texas Cooperative Oil Mill at Pecos in the Southwest Irrigated Cotton (SWIC) region. Seed from line company gins goes to their own oil mills. Line companies and other oil mills buy seed from the independent gins. Some seed is trucked out of the High Plains region for processing; the amount depending on demand, supply, and price considerations.

A 1974 study of Texas cotton gins revealed that 65 percent of the High Plains gins derived all of their revenue from cotton ginning activities and that 93 percent of total income to gins was from ginning cotton. Over 50 percent of the non-cooperative gin owners also produced some cotton. Other enterprises such as fertilizer, herbicide, and insecticide sales and custom application; grain buying, storage, handling, and merchandising; buying and selling cotton including contracting, and selling planting seed, feed, and general farm supplies are common for High Plains gins.

One Central High Plains cooperative gin currently operates a 20,000 head feedlot in addition to a large grain storage and merchandising operation and a seed, feed, fertilizer, and farm supply store. One large corporation gin merchandises large volumes of grain, seeds, fertilizers, and farm supplies

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mainly for its member owners. Many others are involved in non-gin activities to a lesser extent.

The mechanical stripper literally strips the cotton plant through the use of rotating brushes. Green bolls, leaves, branches, pieces of bark, some sand, stems, and parts of weeds and grass are delivered to the gin along with the seed cotton. Typically, 900 pounds or more of gin trash must be disposed of per bale of lint produced. Most gin trash is spread on the fields of producers, using trash spreader trucks, and worked into the soil. Some gins make a per ton or per load charge for spreading trash; others make no charge at all, and even experience difficulty finding enough producers who are willing to have gin trash spread on their land because of the possibility of disease and weed infestation from the trash. Gins that do not have burr spreader trucks may have to pay a commercial hauler to dispose of the trash.

Relatively little insecticides and defoliants are used on High Plains cotton. This allows cotton gin trash to be used as a livestock feed. Several gins have installed burr pelleting mills which pellet the gin trash during ginning; others blow the trash into piles and sell it to custom operators who process the trash during the non-ginning season. Four cooperative gins in the Central High Plains area formed a new cooperative to construct a $500,000 burr pelleting facility during 1976. These four gins haul trash to the pelleting mill site during the ginning season where it is stored in windrows to allow year around mill operation. Most of the pelleted gin trash is sold to feedlots outside of the High Plains region because of ease of handling and lower transportation costs. Feedlots within
the High Plains tend to grind the trash but not pellet it. Loose gin trash is often dumped in piles on range land for beef cows. Several gins have experimented with modulating gin trash, without pallets, to increase density and aid in transportation to and storage at feedlots and in self-feeding range cattle.

**Gin Numbers, Volume, and Capacity**

High Plains cotton producers were served by 389 active gins in 1974; 25 additional gins were idle (table 1). Average volume per active gin ranged from a low of 1,233 bales at Northern High Plains gins in 1975 to a high of 11,205 bales at Southern High Plains gins in 1973. There is great variation in volume ginned from year to year, especially in the dryland area. In the Southern subregion, for example, the average volume ginned in 1974 was less than 20 percent of the large 1973 volume and only one-third of the 1975 volume. For the High Plains region, the 1974 production of 1,201,713 bales was only 44 percent of the large 1973 crop of 2,739,266 bales.

The cooperative form of gin organization is common on the High Plains. Many of the cooperatives and a few of the independent firms operate more than one gin plant; some with two or three on the same yard and a few with two locations operated as one financial organization. Although cooperative firms (97) only account for about 25 percent of the 389 active gin plants, most estimates indicate that about 50 percent of the total crop is processed at cooperative gins.

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Table 1. Number of gins and volume ginned in the 1973, 1974 and 1975 seasons, High Plains region

<table>
<thead>
<tr>
<th>Subareas</th>
<th>Number of gins-1974</th>
<th>Total ginnings</th>
<th>Average volume per active gin&lt;sup&gt;2/&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>45</td>
<td>42</td>
<td>3</td>
</tr>
<tr>
<td>Western</td>
<td>104</td>
<td>91</td>
<td>13</td>
</tr>
<tr>
<td>Central</td>
<td>119</td>
<td>116</td>
<td>3</td>
</tr>
<tr>
<td>Southern</td>
<td>84</td>
<td>78</td>
<td>6</td>
</tr>
<tr>
<td>Southwestern</td>
<td>62</td>
<td>62</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>414</td>
<td>389</td>
<td>25</td>
</tr>
</tbody>
</table>

<sup>1/</sup> Number of cooperative firms, many operate more than one gin plant.

<sup>2/</sup> Based on number of active gins in 1974.

Rated ginning capacity per plant, based on gin stand number and size, ranged from 5.0 to 36.5 bales per hour in 1974, or an average of 11.9 bales per hour, with the average size increasing from the Northern to the Southern areas (table 2). Independent gin plants tend to be smaller than cooperative plants; more of the cooperatives tend to be multi-plant operations.

Table 2. Rated ginning capacity, High Plains region, 1974

<table>
<thead>
<tr>
<th>Area</th>
<th>Rated ginning capacity</th>
<th>Range</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bales</td>
<td></td>
</tr>
<tr>
<td>Northern</td>
<td>5.8 - 20.6</td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>5.0 - 25.5</td>
<td>11.2</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>6.7 - 36.5</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Southern</td>
<td>5.0 - 27.3</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>Southwestern</td>
<td>6.7 - 21.9</td>
<td>12.1</td>
<td></td>
</tr>
<tr>
<td>High Plains total</td>
<td>5.0 - 36.5</td>
<td>11.9</td>
<td></td>
</tr>
</tbody>
</table>

1/ Based on gin stand number and size.

Until recently, nearly all cotton produced on the High Plains was delivered to compresses as gin flat bales. Currently, all bales are either modified flat, which can be pressed to universal density, or they are pressed to universal density at the gin by a gin universal density press. In 1975 about 17 gins (5 percent) delivered 225,000 bales or 16 percent of the crop pressed to universal bale specifications. The number of gins with universal density presses has increased each year since 1975. Universal density compression tariff charges were $3.25 per bale in 1974 and increased to $3.50-$3.75 in 1975. The compress charges the shipper for compression on all bales
regardless of whether the cotton is compressed to universal density at the 
gin or at the compress. Gins with universal density presses received an 
allowance or rebate from the compress amounting to $3.00 per bale in 1975. 

Additional discussion of structural changes in the Central area will be presented later.

Cotton Sampling and Classing

Cotton bales are sampled in two ways: (1) mechanically with a sampler 
at each gin, which regularly removes a small quantity of lint totaling about 
one pound before it goes into the press or. (2) by cutting and removing by 
hand about 1/2 pound of lint from each side of the completed bale. The hand 
sample from each side is split and opposite sides combined to form two samples, 
one for the classing office and one for storage at the warehouse. Mechanically 
drawn samples are cut or sawed in half to provide the two samples. 
On the High Plains, mechanical samplers are used in all gins with universal 
density presses and in some gins with modified flat bale presses. 

Only five modified-flat-bale equipped gins served by the Lubbock 
Classing Office are bonded for taking cut samples at the gin. The balance 
of the modified flat bales not mechanically sampled at the gin are sampled 
at the warehouse, either by hand cutting—very similar to hand cutting at 
gins—or by saw cutting during the receiving into storage operation. 

Regardless of where or how sampled, one of the two original samples 
is placed, along with the bale tag number and attached green card, into the 
USDA, Agricultural Marketing Service (AMS) classing office bag for transfer to the classing office. Gin and warehouse cut samples for the classing 
office are usually not packaged at all, whereas mechanically drawn samples 
are placed in a paper tube. Samples are delivered from the warehouse to
the classing office by the warehouse. Classing office samples taken at the gin are transported, usually by the same trucks hauling baled lint to the warehouse and then transferred to the classing office. A high percentage of the warehouse portion of mechanically drawn samples taken at gins are tucked or sewn into the bale head and sent with the bale to the warehouse where the samples are removed and placed in sample storage. These warehouse samples are usually placed in individual plastic bags at the gin along with the bale tag number. Samples cut at the warehouse are likewise placed in plastic bags.

For the 1975-76 season, ten percent or 35 High Plains gins mechanically sampled 26 percent of the total samples received at the classing offices (table 3). By the 1976-77 season ten additional gins had installed mechanical samplers. In that year, 13 percent or 45 gins mechanically sampled 30 percent of the total volume. Higher volume gins tend to have mechanical samplers and also tend to be the cooperative gins. Many new mechanical samplers were installed for 1975 and there were typical start-up problems resulting in many missed or rejected samples early in the season. Most problems were corrected during the season. Very few gins with an automatic sampler will stop ginning when a problem arises with the sampler. Most gins will continue ginning without drawing mechanical samples on those bales ginned while the problem is being corrected and the mechanical sampler returned to operation.

During the 1975 season, about 83 percent of the bales coming from gins with mechanical samplers were successfully sampled, and 17 percent had to be sampled at the receiving warehouse. The gin bale list delivered to the compress with the bales indicates those bales needing sampling. Several gins are successfully sampling mechanically up to 99 percent of the bales
Table 3. Origin of samples by classing office, High Plains region, 1975-76 and 1976-77 seasons

<table>
<thead>
<tr>
<th>Classing office</th>
<th>Bales classed</th>
<th>Sampling method-bales</th>
<th>Sampling method-gins</th>
<th>Total gins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gin yard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>Percent of bales</td>
<td>Percent of gins</td>
<td>Number</td>
</tr>
<tr>
<td>Lubbock, Tx.</td>
<td>706,314</td>
<td>30  70  0</td>
<td>10  90  0</td>
<td>2/  218</td>
</tr>
<tr>
<td>Brownfield, Tx.</td>
<td>173,053</td>
<td>22  74  0</td>
<td>15  81  0</td>
<td>4  48</td>
</tr>
<tr>
<td>Lamesa, Tx.</td>
<td>262,705</td>
<td>25  75  0</td>
<td>12  88  0</td>
<td>0  42</td>
</tr>
<tr>
<td>Levelland, Tx.</td>
<td>78,989</td>
<td>1   98  0</td>
<td>3   94  0</td>
<td>3  33</td>
</tr>
<tr>
<td>Combined total</td>
<td>1,221,061</td>
<td>26  73  0</td>
<td>10  89  0</td>
<td>1  341</td>
</tr>
<tr>
<td>Lubbock, Tx.</td>
<td>924,188</td>
<td>33  67  0</td>
<td>13  87  0</td>
<td>0  212</td>
</tr>
<tr>
<td>Brownfield, Tx.</td>
<td>301,289</td>
<td>28  70  0</td>
<td>17  81  0</td>
<td>2  48</td>
</tr>
<tr>
<td>Lamesa, Tx.</td>
<td>415,391</td>
<td>32  68  0</td>
<td>19  81  0</td>
<td>0  42</td>
</tr>
<tr>
<td>Levelland, Tx.</td>
<td>92,634</td>
<td>2   96  0</td>
<td>3   94  0</td>
<td>3  30</td>
</tr>
<tr>
<td>Combined total</td>
<td>1,733,502</td>
<td>30  69  0</td>
<td>13  86  0</td>
<td>1  332</td>
</tr>
</tbody>
</table>

1/ Source: Agricultural Marketing Service, Cotton Division, Origin of Samples, Western Region, 1975-76 season and 1976-77 season.

2/ Less than .5 percent.
ginned. The trend is toward more mechanical samplers as more universal density presses are installed. Also, several gins with modified flat presses have installed mechanical samplers in the past few years, mainly those cooperative gins in the TEXCOT pool.

Warehouse samples are placed in large cardboard trays at the warehouse and moved to a special sample storage building. This warehouse sample is the property of the warehouse and can be sold to a merchant who owns the bales of cotton from which it came. If not sold or used, these samples are baled and sold by the warehouse as loose cotton.

Sampling costs, if drawn by a mechanical sampler at the gin, consist of the ownership, operating expenses, labor, wrappers, cut off saw or knives, and related supplies used at the gin. Samples cut at the gin must be taken by a bonded gin employee or by a custom sampling contractor. These samples receive the same warehouse rebate as the mechanically drawn samples.

Of the 503,436 bales from the 1975 crop received by Farmer Cooperative Compress (FCC), the large cooperative compress at Lubbock, 184,793 bales (37 percent) were mechanically sampled successfully and 119,879 (24 percent) were universal density bales. Samples are cut at the warehouse as part of the warehouse receiving charge. Receiving charges are the same for all bales, but the compress pays a rebate of $0.50 per bale on the bales sampled prior to receiving at the warehouse.

The Farmers Cooperative Compress (FCC) is encouraging member gins to install mechanical samplers by arranging a lease-purchase program in which gins make no capital outlay with rebates being applied to the annual lease.

It is not mandatory that cotton be sampled or classified, but on the High Plains nearly all cotton is sampled and classified. In 1973, a few sales contracts called for no sample classification which meant this cotton
was neither sampled nor classed. To receive an official classification, a sample must be drawn according to Agricultural Marketing Service (AMS) specifications for each bale with the resulting class officially representing only that bale of cotton.

The purpose of the Smith-Doxey Act was to provide free uniform cotton classification and market news to farmers. This is done through the AMS cotton classing offices. Producers can ask for a review classification if dissatisfied with the original results. The cost is $0.45 per sample, plus any costs incurred in providing a sample to the classing office such as resampling, transportation, warehouse charges, and so forth. New "green cards" are issued to the producer based on the review class, regardless of whether higher or lower. About one-half of one percent of all samples are typically reviewed. The classing office accumulates about 1/2 pound of cotton per sampled classed; this cotton is baled and sold as loose cotton to the highest bidder.

The "green card" is purchased by gins as part of the bale tag. Placed in the classing office sample when the sample is drawn, the "green card" goes with the samples until classed for grade, staple, and micronaire. Values are stamped on the "green card" and also in the classing office gin record book.

The classing office returns the completed "green cards" to the gin, which in turn gives them to the producer. Upon written request or instruction, the classing office will turn green cards over to a trucker, marketing association, or merchant. Green cards from cooperative gins served by the Lubbock Classing Office go to Plains Cotton Cooperative Association (PCCA) where the data are processed by computer. PCCA then returns the cards to the gins and producers via a PCCA courier service which makes daily rounds to the gins. If gins do not buy "green cards" as part of bale tags,
USDA furnishes a card. Cards furnished by USDA are also used when tag "green cards" are lost, damaged or destroyed. The USDA card requires more work, as bale number, gin name, and so forth, must be written on each card.

The cotton classing office staff is involved in many activities other than classing cotton. A cotton variety survey is conducted to determine varieties planted each season. Gin equipment schedules are reviewed with gin managers or owners each year. Ginning charges and related data schedules are completed and forwarded to AMS regional offices. Considerable effort goes into enforcing sample regulation at gins, warehouses, and oil mills (cotton seed samples) and delivering sample sacks, and tags to the sampling agents. Other activities include market news reporting, estimates of crop conditions, harvesting rates, supply, demand and price information, and review of spot cotton quotations.

During the off season, sample sacks are sorted, repaired, cleaned and bundled for the next season, dust control and other equipment installed, maintained, repaired and painted. Many of the cotton classers work more than one office as the cotton harvest progresses.

Transportation, Warehouses, and Compresses

Baled cotton lint produced on the High Plains moves directly to a warehouse or compress following ginning. Usually the cotton is still owned by the producer and may or may not be committed to a specific market. The bale normally remains in the receiving warehouse until an order is received to ship it out to domestic mills or for export. Ownership may change several times before bales are actually shipped; for example, from producer to f.o.b. merchant to shipper to mill buyer.

Transportation

After ginning, baled cotton is usually transported from gin to compress
by the gin with its own truck or by commercial haulers. The charges of individual gins for this service varies widely. The most important factor influencing the charge apparently is the distance from the gin to the compress, but other factors are also involved. Some gins make no specific charge for hauling. They include it in the ginning and/or bagging and ties charge. Some gins use small trucks while others use either single or tandem-axle semi-trailers. Generally, as distance between gin and warehouse increases, the bales per load also increases. Some trucks carry 80 or more bales per load; others may carry only 20 bales.

In 1975, the charges averaged about $1.00 per bale across the High Plains. Rates regulated by the Texas Railroad Commission amounting to $1.00 per bale plus one cent per mile per bale on distances over 10 miles, with additional loading and handling charges permissible, must be charged by specialized carriers for transporting cotton from gin to warehouse. These rates were effective August 2, 1976. However, a considerable volume moves under non-regulated rates, usually at a slightly lower cost.

It is difficult to determine average distance from gin to warehouse as bales are not always hauled to the warehouse located nearest the gin. All bales going to cooperative warehouses must be either moved to Lubbock or Plainview, whereas bales going to West Texas Industries (WTI) or other independent compresses have several possible High Plains locations. Average distance to compress from gin is probably greater to the cooperative than to independent compresses and warehouses. Most bales are transported less than 50 miles to a warehouse or compress with relatively few bales hauled over 150 miles from gin to warehouse.

By the summer of 1977, all inbound freight or trucking allowances in Texas were cancelled, and rail freight rates to Texas ports and Southeast mills were reduced by 10 percent with a maximum of 15 cents per hundred pounds.
Prior to cancellation in 1977, PCCA, FCC, and other warehouses had cooperated with railroad companies to develop a transportation or inbound freight allowance program. Under that program cotton moved from gins to compresses by truck. However, railroad billing was deducted to cover transportation as if the cotton moved in box cars. When the cotton was later sold and shipped from the compresses to mills or ports, all or part of the railroad freight from gins to compresses was refunded under the rail transit system. Railroads paid an allowance to the farmer through FCC, or other compresses and gins for having moved the cotton by truck even though the railroads did not perform that service.

Inbound freight was paid at the time the cotton was shipped from gins to storage facilities. Warehouse receipts indicated the existence of outstanding freight bills as a lien against the bale. The lien was satisfied by the parties surrendering the warehouse receipts by shipping an equal amount of cotton by rail. If that was not done, the inbound lien charges were billed to the party surrendering the warehouse receipt.

Approximately 70 percent of the High Plains cotton is shipped from warehouses by rail and 30 percent by trucks.\(^6\) Shipments to Texas ports are about evenly split between trucks and rails with rail carrying the bulk of cotton to domestic mills. About 50 percent of the total shipments in 1975-76 were through Texas ports.

Container use is increasing. Containers loaded at the warehouses are trucked to local rail yards for loading on to flat cars for shipment to Gulf

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ports. An increasing amount of High Plains cotton is being loaded into containers either at inland warehouses or at Texas Gulf ports and then moved by rail "mini-bridge" from Texas Gulf ports to West Coast ports for export.

Very few containers are trucked directly from warehouses to Gulf ports and none to West Coast ports. Some flat and van trucks haul cotton to ports where it may be stuffed into a container. The trend is toward increasing truck shipments to both ports and mills. Freight charges to Southeastern mills in 1976 were $8.00 to $9.00 per bale by truck and $9.00 to $10.00 by rail. The rate to Texas ports was about $5.00 per bale by truck and rail. Rail rates to West Coast ports were $12.00 per bale.

Warehouses and Compresses

Cotton producers on the High Plains are served by 16 cotton compresses having a storage capacity of 1,995,125 bales, and 12 cotton warehouses with a 374,150-bale capacity for an overall total of 2,369,275 bales of storage capacity (table 4). Temporary outside storage, usually on the compress yard, is common during large crop years such as 1973 when storage space was not adequate to handle all bales inside. The storage capacity is concentrated in the Central High Plains area, specifically the cities of Lubbock and Plainview. Approximately 35 percent of the storage space is in Lubbock and 11 percent in Plainview. Five other locations with an additional 10 percent of the storage space raise the total to 56 percent for the Central High Plains area (table 4). The balance of the storage space is scattered over the rest of the High Plains.

Ownership can be placed in three groupings: (1) two cooperative firms having six presses at two locations with a 854,500-bale storage space, (2) West Texas Industries, Incorporated, with nine presses having a
Table 4. Cotton warehouses and compresses by ownership, location, and capacity in the High Plains region, 1975

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<td>Northern</td>
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<td>Compresses</td>
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<td>Compresses</td>
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<td>Central</td>
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<td>Compresses</td>
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<td>4 309,150</td>
<td>1 52,500</td>
<td>7 1,216,150</td>
<td>25 51</td>
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<tr>
<td>Warehouses</td>
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<td>4 106,750</td>
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<tr>
<td>Total</td>
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<td>Warehouses</td>
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<td>Total</td>
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<tr>
<td>Total</td>
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<td>3 205,800</td>
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<td>High Plains total</td>
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<td>5 494,800</td>
<td>16 1,995,125</td>
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<td>9 320,250</td>
<td>3 53,900</td>
<td>12 374,150</td>
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<td>8 548,700</td>
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<td>Percent of total</td>
<td>7 36</td>
<td>64 41</td>
<td>29 23</td>
<td>100 100</td>
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1/ Includes two warehouses with 48,500-bale capacity in Northern and one warehouse in Western area with 69,500-bale capacity, or 118,000 bales of total capacity owned by West Texas Industries (WTI) which did not operate in 1975.

Source: Approved capacity, Commodity Credit Corporation (CCC) and visits to the areas.
645,825-bale capacity, and nine warehouses with storage for 320,250 bales, and (3) other independent firms owning five presses with storage for 494,800 bales and three warehouses with a 53,900-bale storage space (table 4).

Farmers Cooperative Compress (FCC) at Lubbock has five presses but operates as one firm with 667,000 bales or 29 percent of the total warehouse capacity. The other is Plainview Cooperative Compress which has one press and warehouse space for 187,500 bales. Cotton from both of these cooperative compresses, Rolling Plains Cooperatives Compress at Sweetwater, Texas, and Oklahoma Cotton Cooperative Compress at Altus, Oklahoma, is marketed through Plains Cotton Cooperative Association at Lubbock.

West Texas Industries, Incorporated, a recently (1975) reorganized corporation, is composed of what formerly included the following companies: Texas Compress and Warehouse Company, United Compress and Warehouse Company, Union Compress and Warehouse Company, West Texas Compress and Warehouse Company, Panhandle Compress and Warehouse Company and Trinity Compress and Warehouse Company. Locally, plants are sometimes referred to by their former name. WTI has three warehouse locations (118,000 bales) in the High Plains area that were not operated in 1975, and sold three warehouses for non-cotton storage before the 1975 season. In addition, WTI has a compress with a 30,000-bale capacity at Pecos, Texas, (SWIC region) that is not operating.

The remaining five compresses and three warehouses are local independent operations; one warehouse with a 14,900-bale capacity belongs to a Lamesa independent gin firm and is located near the gin.

Warehouse Operation

When Cotton is moved to public warehouses-compresses, certain services are performed incident to its storage, compression, and shipment to mills
or ports. In addition to compressing modified flat bale cotton to universal density, compresses normally provide these basic services: (1) receiving, (2) storage, (3) break-out, and (4) shipping.

Break-out and shipping are often combined and called delivery by the compress. Other services performed, when requested by the owner of the cotton, include resampling and reweighing (either from stock or at time of other services), patching, marking, branding, ranging for inspection, consolidation of transit cotton, and other miscellaneous services. Each warehouse or compress issues an annual tariff schedule stating charges and conditions for performing the above functions and other special services.

Normally the compress bills the producer for the receiving, part of storage, and delivery charges. Recently some merchants have been paying the delivery charges. Compression, insured storage, resampling, reweighing, and other miscellaneous warehouse charges are normally paid by the merchant-shipper. Mill buyers usually buy f.o.b. mill with the shipper making arrangements for and paying the warehousing and transportation costs not charged to the grower. Very little High Plains cotton is sold direct to mill or export buyers by producers.

The receiving charge on the High Plains was $1.50 per bale in 1974; it increased to $1.75 in 1975. This charge includes $0.25 per bale for the producer's contribution to the Boll Weevil control program where applicable. The charge is collected by the warehouses for Plains Cotton Growers, Incorporated, and does not represent income to the warehouse. The receiving charge also includes sampling on arrival. When bales are sampled mechanically or hand cut at gins, the gins are rebated $0.50 per bale for each usable sample.
The insured storage charge was $0.75 per month for the 1974-75 season. The baled cotton is usually stored for several months. The total charges on an individual bale are normally shared in some manner among the shippers, other merchants, growers, and mills who hold cotton.

Individual warehouse receipts for each bale are issued by the warehouse when received as part of the receiving charge. These warehouse receipts, which constitute the legal proof of ownership document, are issued to the producer. Growers surrender their warehouse receipts and green cards to the first buyer. This buyer in turn may sell the warehouse receipts to other local buyers, mills, or exporters without ever seeing the actual bale it represents. When the owner (whomever it may be) wants cotton shipped from the receiving warehouse storing it, he must surrender the original receipt for cancellation by the warehouse. No cotton will be delivered by a warehouse until shipping instructions and warehouse receipts are received by the warehouse office where the bales are stored. The delivered bales are matched to the warehouse receipt numbers according to warehouse tag numbers applied at receiving. Adjustment of accrued charges must be made between buyers and sellers, and billing instructions must be included with shipping orders. The party surrendering the warehouse receipt is ultimately held responsible for all accrued charges.

Break-out and shipping are usually listed as delivery, shipping or loading on the tariffs. Although tariffs vary, this charge was typically $1.50 per bale for loading into box cars and $2.00 per bale for loading on trucks or into containers in 1974.

The Farmers Cooperative Compress (FCC) pays cooperative gins a compress agent's fee of $1.00 per bale to arrange shipping to warehouse. Independent compresses have similar arrangements with independent gins.
Merchandising High Plains Cotton

A very vital step between producer and textile mill is merchandising the cotton. The cotton shipper performs the major part of this function. The cotton shipper offers and performs the many services necessary to deliver the appropriate quantity and quality of cotton at the time and location required by a domestic or foreign mill customer. Most spinners are not interested in purchasing cotton bales having a wide diversity in length, grade, micronaire strength, and other quality factors found in individual producers' cotton.

Several groups of firms and individuals are active in marketing High Plains cotton including shippers, mill buyers, f.o.b. merchants, brokers, commission buyers, and gins.

Central market firms operating as shippers link the farm producer and the mill consumer of raw cotton. These firms buy baled cotton in lots of mixed qualities as near to the point of growth and as soon after it enters marketing channels as practical. Bales are then concentrated and stored at locations which facilitate distribution. In selling, shippers generally arrange for and pay the costs of transportation. The cotton shipper is the key decision maker in port selection for export cotton, transportation mode, and route for domestic shipments. Most of the costs and risks associated with other marketing services—including assembly, sampling, quality classification, storage, interest, price risks, and selling—are also assumed by shippers.

Brokers, local f.o.b. merchants, and commission buyers function chiefly in aiding cotton shippers to acquire or sell cotton. Brokers sell on commission for producers, local market buyers, and other types of owners. Commission buyers purchase cotton mainly for shippers and mills,
mostly from growers, ginners, and local buyers. Local merchants, who buy cotton in local markets or at gin points, resell in mixed lots within a short time to shippers or mill buying agencies in nearby central markets.

Farmers on the High Plains sell nearly all of their cotton on the basis of the "green card" classification. Local intermerchant trading, which may average 50 percent of the crop in some years, is also on the green card values. Very few local merchants (estimated at three or four in Lubbock) have their own cotton classers.

The official "green card" grade does not fully describe all attributes of a bale of cotton. Therefore, when a shipper-merchant sells cotton to domestic or export mill buyers the "green card" grades are not commonly used. Only 5 percent or less of domestic and 8 to 10 percent of foreign sales from the Lubbock area in 1975 were based on "green card" values where the green card actually goes with the sale. The rest of the "green cards" are disposed of by the merchant after he sells the bales on some other basis.

Most mills buy on description or type (small sample of cotton), either by offering a price for a type or asking merchants to bid on a type. The type may be very specific or quite general depending on mill needs. The merchants may be able to determine from the "green card" which bales will fit the type, but usually the practice is for merchants to purchase the reserve samples from the warehouse or have another sample cut, to have additional quality factors determined, and then fit it into a type, hopefully at a higher value than he paid for it.

Once a merchant (or anyone else) takes ownership to a bale they can do whatever they want with it. If the merchant feels a new sample will allow him to do a better job of merchandising the cotton, he may order a new sample cut by the warehouse.
Approximately 100 cotton buying and selling firms currently operate on the High Plains. In addition, some gin managers act as commission buyers or agents for other merchants or mills. The majority of the merchandising firms are located in Lubbock; several national firms have Lubbock offices.

**Adjustments and Current Developments**

Cotton gin operating cost studies were conducted by USDA between 1965 and 1973 for the High Plains and other areas.7/ Detailed analysis of the changes in gin number, size, and capacity in the Central High Plains area (Crosby, Floyd, Hale and Lubbock counties) only are summarized here.

In 1973, these four counties contained a total of 103 ginning firms operating 137 gin plants and ginning 788,890 running bales for an average of 7,659 bales per gin firm and 5,758 bales per gin plant. Average rated capacity per gin firm was 15.1 bales per hour compared with 11.4 bales per hour for the average gin plant.

There were 78 firms operating only one gin plant, 16 firms operating two plants, and nine firms operating three gin plants. Gin ownership consisted of 28 cooperative firms with 53 gin plants, 70 independent firms with 78 plants and two line companies with six gin plants at five locations. Cooperative, independent, and line gins are often located in the same town and compete directly with each other.

In 1965, there were 115 ginning firms that ginned 746,873 running bales for an average of 6,495 bales per firm. Gin ownership consisted of 33 cooperative firms, 80 independent firms and two line companies.

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Rated ginning capacity, based on gin stand number and size, totaled 1,555 bales per hour in 1973. Cooperatives had 714 bales per hour (46 percent), independents 776 (50 percent) and line firms 65 bales per hour (4 percent) of total rated ginning capacity. Comparable 1965 values show 1,563 bales per hour total capacity. Cooperatives had 723 (46 percent) independent 811 (52 percent) and line firms 29 bales per hour (2 percent) of total rated ginning capacity. Although there were 12 fewer ginning firms in 1973 than in 1965, a decrease of 12 percent, ginning capacity decreased only eight bales per hour or one-half of one percent due to an increase in average gin capacity.

In bales per hour, the capacity at cooperatives averaged 25.5 bales per firm and 13.5 bales per gin plant, compared with 11.1 and 9.9 bales for independent gins, and 13.0 and 10.8 bales for line company gins. Overall average bale per hour capacity was 15.1 and 11.4 bales for firms and plants, respectively. The 1965 capacities per firm were 21.9 bales for cooperatives, 10.1 bales for independents and 14.5 bales for line companies with an overall average of 13.6 bales per hour.

Rated capacity in 1973 ranged from seven to 60 bales per hour for gin firms and seven to 30 for gin plants. The rated ginning capacity of cooperative firms ranged from eight to 60 bales per hour, independents from seven to 29 bales, and line companies from nine to 19 bales per hour. Compared with ginning firms, ginning plants had a slightly narrower range in hourly capacity—seven to 30, six to 24 and seven to 12 for the cooperative, independent and line gins, respectively.

The volume of cotton ginned by cooperative firms in 1973 averaged 14,319 bales. The volume ranged from 2,947 to 42,060 bales. Independent gin firms processed an average of 4,051 bales, and the volume ranged from
352 to 19,031 bales. The volume ginned by cooperative firms in 1965 averaged 11,118 bales while independent firms processed an average of 4,627 bales.

The total ginning in the four counties in 1973, based on data from individual firms, was 772,052 bales with 400,939 bales (51.9 percent) ginned by cooperatives, 353,588 bales (45.8 percent) ginned by independents, and 17,525 bales (2.3 percent) ginned by line company gins. Total ginnings in 1974 were only 429,533 bales or 55.6 percent of the 1973 ginning volume, but the breakdown by ownership was nearly the same; that is, 52.5 percent by cooperatives, 45.2 percent by independents, and 2.3 percent by line companies. This suggests that growers are loyal to their gin in a low production year, and gins are responsive to grower needs in large crop years. Cooperative gins represent 27 percent of the ginning firms, 39 percent of the gin plants, 46 percent of the total hourly rated capacity. These firms ginned 52 percent of the total bales in 1973. Comparable figures for 1965 are 29 percent of the ginning firms, 46 percent of hourly rated capacity and 49 percent of the total bales ginned.

During the 1969 to 1975 period, nine independent gin firms changed ownership and 19 firms made changes in gin stands and resulting rated capacity of the gin plant. Fifteen cooperative gins and one line plant changed rated capacity. In addition, eight independent gins were dismantled and ceased operation. One independent gin was purchased and operated as a third plant by another independent firm, and two other independent gin plants were purchased by a cooperative firm which continued to operate one plant as a third gin but dismantled the other plant for parts and turned the gin yard into a fertilizer farm supply headquarters.

Five cooperative ginning firms dismantled five gin plants; all being the second, third or fourth plants belonging to the gin firm and usually the
oldest and smallest plants. These plants were usually dismantled during or after making improvement in one or more other plants with the usable equipment being sold or placed into their existing plants. Another six cooperative firms merged into three firms with one firm continuing to operate all three plants, one firm dismantling one of four plants and the other firm dismantling two of four plants. In addition, two Crosby county (Central High Plains) and one Dickens county (Western Rolling Plains) cooperative ginning firms with five gin plants merged to form American Cotton Growers (ACG) at Crosbyton in March 1973. The five existing plants were dismantled and one completely new gin, commonly called the "ACG Super Gin" was constructed.

American Cotton Growers

The stated purpose of American Cotton Growers (ACG) is to increase the profitability of cotton farming in two ways: (1) by marketing better cotton and cotton by-products for more money and (2) by lowering handling costs between the farm and the customer. Since 1973, ACG has expanded to three divisions: ACG-Crosbyton Gin Division, ACG-TEXCOT seasonal marketing pool, and ACG-Textile Division, Littlefield, Texas. ACG suggests some potential implications for cotton marketing in the future, and for this reason warrants additional discussion and elaboration.

ACG-Crosbyton Gin Division

The 42,060 plus bales ginned at ACG-Crosbyton Gin Division during the 1973-74 season was probably the largest number of bales ever ginned at a single gin plant in the United States during one season up to that time. Although other gin plants on the High Plains and in other parts of the Cotton Belt have comparable size and number of stands, many features of ACG make it a unique organization.
ACG takes control of the members' cotton as soon as it is ricked at the turn row in the field and maintains control until sold through the TEXCOT pool or processed through the ACG textile mill. Seed cotton is blended during ginning, lint is packaged in universal density bales, gin trash is pelleted and sold for livestock feed, and cottonseed is delivered to Plains Cooperative Oil Mill (PCOM). No ginning charge, as such, is made.

During the first two years of operation, all seed cotton was placed in ricks by producers; conventional trailers cannot be used. During the 1975 season, the first 6,000 bales were dumped directly from stripper basket into container. When harvesting exceeded ginning capacity, all producers began ricking and the gin started loading containers from the completed ricks. In addition, several hundred bales were moduled during 1975. Moduling is expected to increase at ACG in the years ahead. When a grower completes harvesting a field or farm, he calls the ACG office, a field man inspects and measures the ricks, places a metal pipe container into the rick which holds information on that rick. This procedure establishes the order for pick-up and ginning, similar to weighing and tagging in a conventional trailer, and allows a complete field or farm to be block-ginned. This practice results in faster ginning, more uniform bale weights, and it greatly reduces the number of remnants. ACG uses large semi-trailers to haul cotton to the gin in the wiresided containers holding enough seed cotton for approximately 10 bales of lint. Ricked cotton is loaded into the containers by large front end loaders; three loading-hauling crews operating 10 to 12 hours per day provide the gin with enough seed cotton to produce 400 to 600 bales of lint in 24 hours. The loaded container is placed on the gin yard until needed for ginning. It is again loaded and transferred to a dumping system (as opposed to conventional suction) for
unloading into the seed cotton blending equipment, where the container lot is uniformly blended prior to ginning. After ginning and before packaging, a mechanical sample is drawn from each bale. Tests have shown that one sample from the lot or a sample from only one bale in the lot adequately represents the eight to 12 bale lot. The Agricultural Marketing Service (AMS) classing office cannot give an official class on a sample for more than one bale and a sample can officially represent only the bale from which the sample is taken. There is potential for cost saving in lot sampling, but it is not fully acceptable at this time. Physically, blending produces more uniform bales (blender operational problems have been overcome since the 1973 and 1974 seasons) but it is not clear if the economic value is worth the cost, or if it can be achieved by other means such as leveling seed-cotton as modules are built and using module feeders at gins.

Bales are pressed to universal density, automatically strapped and packed in shrink-pack clear plastic wrappers. ACG plans to use the shrink-pack material currently on hand and then switch to polypropylene or burlap bags used by many other gins with universal density presses. All bales are delivered to Farmers Cooperative Compress (FCC) in Lubbock for storage.

ACG does not make a charge for ginning, but operates on a cost basis. All costs, from picking up the cotton from ricks to merchandising it through the seasonal pool, less other income from burr sales, planting seed margin, and other income, are divided by total pounds of seed cotton ginned. This cost ($2.08 per hundred pounds in 1974) times the total seed cotton weight is subtracted from each individual growers' lint, seed, and oil mill credits. Growers receive cash advances equal to the loan value when cotton is delivered to the pool and other advances during the season with a final payment
after the pool is closed out. The cost of $2.08 per hundredweight of seed cotton ginned is not directly comparable to ginning charges levied by other gins. Local 1974 ginning charges of about $1.50 per hundred pounds plus the grower assembly and marketing costs would seem to make total costs about equal, but the 1974 crop was small, resulting in high fixed costs, and many gins did not break even with the ginning charge assessed that year.

ACG-TEXCOT Pool and ACG Textile Division

Between the 1974 and 1975 crop years, American Cotton Growers expanded their operation to include some 3,000 cotton producers in 26 ginning associations across the High Plains and Rolling Plains. The TEXCOT marketing pool and ACG-Textile Division were formed to merchandise member raw cotton to domestic and foreign mills and as finished denim fabric manufactured in their own mill.

The ACG-Textile Division features a 38 million dollar denim manufacturing mill which employs "open-end" spinning. Annual output is expected to be 20 million yards of denim produced from 65,000 bales of local cotton. A sample from each of the 200,000 to 300,000 bales produced by TEXCOT member growers is processed through the Plains Cotton Cooperative Association (PCCA) fiber testing line with data stored on magnetic tape. Specifications such as strength, grade, staple, mike, warehouse location and so forth are programmed to select the bales best suited for the textile mill use. These bales are reserved for the denim mill. ACG contracts with PCCA to merchandise the balance of the TEXCOT pool that is not utilized in the denim manufacturing plant.

Each quality of cotton stands on its own merits in the seasonal pool. Quality discounts and premiums are reflected in progress payments and
final settlement to each producer. The pool strives for a high average price by marketing throughout the year. The textile mill is charged the seasonal average price for specified quality and growers are credited that value just as any other pool bales; the textile mill is charged all warehousing, transportation, and handling costs on the bales it uses.

The members of the 26 cooperative ginning associations share in the earnings of the Textile Division based on the amount of cotton each member produces. The Textile division is closed; that is, no other ginning association can join it now.

TEXCOT seasonal pool sales policy is set by a seven-man Board of Directors and a 26-man Textile Pool Committee—one representative from each ginning association. Individual growers must "sign out" of the pool during February if they no longer wish to sell through the pool. Therefore, if a producer signs out of the pool, he must gin his cotton at a non-pool gin. The 26 member gins, except ACG's Crosbyton Gin Division, operate, and make ginning charges and merchandise seed independently of each other, similar to other gins in the area. Four of the TEXCOT pool gins have universal density presses; the rest have modified flat bale presses, and most have mechanical samplers. To the extent possible, the textile mill uses modified flat bales. This may discourage some pool gins from considering universal density presses even though they would receive $3.00 per bale compression allowance from FCC. The FCC compression charges to the textile mill in 1975 was $3.50 for each bale of compressed cotton it used.

Other High Plains Textile Activities

Three other small yarn spinning firms on the High Plains are located in Lorenzo, Lubbock, and Abernathy, Texas. These firms produce yarn only, using local cotton and some man-made fibers and cotton blends.
Levi-Strauss has a cutting and sewing plant in Amarillo (Northern area), Plainview and Lubbock (Central area) and in Hobbs, New Mexico (Southwestern area) as well as two plants in El Paso and eight additional plants around the state.

Royal Park Incorporated, a Dallas-based manufacturer of women's sports-wear, has a 15,000 pair per day pants sewing and distribution plant at Tulia, Texas (Northern area). It also has plants located at Childress, Jacksboro, and Bryson in the Rolling Plains; Dallas and Ennis in the Blacklands; and Fort Stockton in the SWIC region. A children's clothing factory operates at Lamesa, Texas (Southern area) producing mainly dresses and skirts.

TELCOT

TELCOT, operated by Plains Cotton Cooperative Association (PCCA) in Lubbock, Texas since the 1975-76 season, has been successful as an electronic market. The TELCOT system has the capability to compile recaps from "green card" data on individual bales, retain selling decisions in the hands of producers, provide potential buyers with as much or more information as traditional procedures, and provide current market prices—all on a timely basis.

TELCOT is an inter-connected network of remote, cathode-ray terminals connected to a central computer at PCCA. The terminals are located in the offices of PCCA and some 25-30 subscribing cotton merchants. Terminals were also located in 15 gin offices in 1976-77 and 75 gin offices in 1977-78.

Any producer from any of the 128 cooperative gins on the High Plains and in the Rolling Plains can use TELCOT to sell cotton. After a producer's cotton has been harvested, ginned, and classed, the class cards for each bale are delivered to PCCA where the data on them are coded into the central
computer under the producer's identification number(s). The producer then has access to a running account of his cotton available for sale. The producer using TELCOT has essentially three alternate procedures by which to sell his cotton: (1) the TELCOT "regular offer," (2) the TELCOT "firm offer;" and (3) obtaining local bids independent of TELCOT and offering it for sale through the regular offer to see if he can get a higher bid.

The regular offer operates as follows: the producer through a member gin, can call PCCA via a WATS telephone line (or over the gin office terminal) and obtain PCCA's estimate of what his particular cotton will bring on the market at that point in time; that is, the "asking price." If agreeable with the producer, the cotton is offered for sale on the system. Potential buyers can call up the recap of that lot on their screen to see if they want to bid on it. Bidding on the lot is open for 15 minutes; if the high bid is within 25 points (.25 cent per pound) of the asking price, the cotton is automatically sold to the highest bidder. If the high bid is more than 25 points below the asking price, the producer has the option of accepting or rejecting the bid. Producers can also obtain bids from buyers who do not subscribe to TELCOT, and with the potential buyers consent, offer the cotton over TELCOT (alternative three above).

With the TELCOT firm offer system, the producer can specify a price he will accept for the cotton and the first buyer willing to meet that price buys the lot. This system allows the producer to establish an offer price; in addition, it provides a means for buyers to search all firm offers for specific price, quality, and other characteristics.

Under any of the three procedures, the computer invoices the cotton for both the buyer and seller. Subscribing merchants and gins with terminals pay a lease fee on the remote terminals which includes a charge for
the telephone line connection with the computer. PCCA charges the gin a service fee of $1.00 per bale for communication, records, and invoicing services; this fee applies to all cotton sold through subscribing gins whether or not the cotton sells over TELCOT. Each gin also establishes its own fees for services charged to merchants, typically $2.00 per bale.

The TELCOT system allows small lots to be grouped and offered for sale as a single lot. Present plans call for a forward contracting option similar to the firm offer, providing market news service to merchants and gins, a computerized gin accounting system, and general communication between gins, merchants, and PCCA offices over the terminals.

PCCA, along with other merchants, participates in the bidding over the TELCOT system. The firm buys cotton from producers to be merchandised by PCCA as a cotton shipper to domestic and foreign mills. TEXCOT pool cotton not used at the denim mills is not offered over TELCOT, but is merchandised to mills by PCCA as the marketing agent for the ACG-TEXCOT pool.

**Instrument Test Line**

During the 1976 season, a field test measuring cotton quality by instrument was started at the Agricultural Marketing Service (AMS) Lubbock Classing Office. The Agricultural Research Service (ARS) and Economic Research Service (ERS) were involved in setting up the equipment and evaluating the results, respectively. All bales from eight gins in the Slaton area southeast of Lubbock were tested by instruments as well as classed conventionally in 1976. A modified "green card" furnished by AMS was used, showing regular class values for grade, staple and mike, and also showing instrument values for color, trash and condition codes (grade), length (staple), with additional values for length uniformity and strength. This test is expected
to last at least five years. Partial results of the first year's test are reported in a CED working paper.

Textile Research Center

The Textile Research Center (TRC) at Texas Tech University, Lubbock, Texas, conducts research related to cotton, wool, and mohair utilization. TRC provides instrument quality measurements for cotton breeders, growers, and merchants on a fee basis. The research studies conducted at TRC are broad in scope and deal with fiber testing, carding and spinning, new methods of producing yarns, fabric development, and dyeing and finishing procedures. "Open-end" spinning and denim production and finishing have received considerable research attention.

Summary

The High Plains of Texas and New Mexico account for 20 percent or more of the acres planted to cotton in the United States most years. Harvested acreage, yield and production vary widely from year to year and from county to county because of moisture shortages which prevent planting, blowing sand, hard rain and hail that destroy the growing crops, drought during the growing period, early freezes before the crop matures in the fall and at times strong winds, rain and snow that damage the crop before it can be harvested. To help combat weather related problems, producers grow short season, short staple, storm-proof, stripper harvested cottons that are relatively lower in quality compared with cotton from the rest of the belt. Normally, 60 to 70 percent of the High Plains cotton crop is exported for use in making low count yarns.

Module and rick seed cotton handling and storage has increased tremendously since being introduced in the early 1970's. By 1977, some gins were handling over 90 percent of their total ginnings in modules. Modules have become the main handling system for many producers and gin communities. Ricks are used mainly for overflow during large crop years when producers using trailers would have to stop harvesting due to non-availability of empty trailers. As more module builders are put into use, less rick storage will be necessary even in large crop years.

Gins have become involved in transporting seed cotton from farms to gins, especially with the palletless module mover trucks. Trailers hold three to six bales of machine stripped cotton. Most communities are served by several gins.

Like production, average volume ginned varies greatly from year to year and gin to gin. Average volume ranged from 1,200 bales per gin in the Northern High Plains in 1975 to over 11,200 bales in Southern High Plains gins in 1973. Average ginning capacity is about 12 bales per hour per gin plant. Many gin firms operate two or more gin plants. Universal density presses, mechanical samplers and module feeders are being installed at a steady rate across the area mainly at the large capacity, higher volume gin plants.

Ginning and wrapping charges per bale amounted to $28.50 in 1973, $33.20 in 1974, $38.80 in 1975, and $40.00 in 1976. The increase in 1975 related mainly to the increased volume of seed cotton needed per bale of lint produced. Cotton bales are moved directly from gin to warehouses by gin owned or commercial trucks. Temporary outside storage at the warehouses is usually required during large crop years.
Warehouse charges for three months (including receiving, storage, compression, and shipping) averaged about $9.00 per bale in 1975.

Several market outlets exist for High Plains cotton, including central market firms, shippers, f.o.b. merchants, mill buyers, brokers and commission buyers. Cooperatives play an important role in the High Plains cotton industry. Estimates indicate that 40 to 50 percent of the crop is handled by cooperative gins, warehouses, oil mills and marketing firms.

Cooperatives took the lead in many recent developments including formation of American Cotton Growers with its "super gin," TExCOT seasonal marketing pool, and textile mill. Plains Cotton Cooperative Association (PCCA), the cooperative marketing association serving most of Texas and Oklahoma and Eastern New Mexico, developed and operates TELCOT, an electronic computerized marketing system that uses the "sealed bid" concept.