

# THE LONG RANGE IMPACT OF FAIR ACT ON GINNING

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## Abstract

The 1996 Farm Bill provisions allow eligible producers to plant any program crop they select. Therefore, the financial risk of all sectors within the cotton industry will increase substantially because of production and price uncertainties. The economic risks involved will restructure the cotton industry. Cotton gins will face financial problems associated with potential lower volumes and reduced utilization of capital investments. The larger cost efficient gins will have the greatest economic advantage. The result will lead to consolidation of smaller gins and fewer but larger gin operations. Also, the economics of fixed capital suggests longer ginning seasons.

## Introduction

The 1996 Farm Bill will have far reaching effects on the cotton economy. At the very least, the Bill will restructure the cotton industry's infrastructures and likely raise the U.S. price level of cotton. Agribusinesses and farming operations will be guided strictly by the economics of costs and returns. If producers and their lenders decide to limit cotton acreage, then those associated agribusiness suppliers, handlers, ginners, oil mills, warehouses, merchants, textile manufacturers and consumers will be negatively impacted.

The new Farm Bill substantially changes the nature of income support for cotton by lowering the income safety net and by allowing farmers to plant alternative crops. Cotton has been the star performer among major farm crops in the last decade by roughly doubling domestic consumption. But, under the market dependent program, the keys to maintaining growth for the U.S. cotton industry also include industry teamwork and continued technological advances that keep production costs reasonable.

Growers with efficient operations on the more productive soils report production costs in the 60 to 70 cent per pound range. However, a large number of producers have total costs in the 75 cent and higher range. These growers and their areas of production will experience the greatest financial stress under the new Farm Bill. These areas will lean toward planting grain, soybeans and grass.

The price received for cotton by farmers averaged below the Farm Program target price from 1981 to 1995. As a result,

producer cash flow was supported by deficiency payments. In turn, a large part of the cotton industry's infrastructure was indirectly supported by the cotton program.

## Background

The U.S. cotton industry has shown significant growth since the implementation of the marketing loan provisions from the 1985 Farm Bill in 1986. Where the use of cotton totaled roughly 12.0 million bales in the decade before 1985, usage increased to the 18.0 million bale level by 1995. Most of the 6.0 million bale increase was due to growth in domestic mill use. Farm price, however, has averaged near 60.0 cents per pound during the decade before and after the 1985 cotton program. Thus, improved yields and a 30 percent increase in acreage has produced enough cotton to meet the 50 percent increase in usage at essentially the same price.

The shift in cotton from West to East is clearly emphasized by changes in regional production shares since 1986. In 1995, the Southeast produced 22 percent of the crop, a sharp gain from 8 percent in 1986; the 1995 Delta share was 34 percent, a small increase from 32 percent in 1986; the Southwest contributed 26 percent of production in 1995, down from 29 percent in 1986; and the West dropped from 31 percent in 1986 to an 18 percent share of production in 1995.

Therefore, the largest impact of the new farm program on cotton will likely be felt in the Southeastern and Delta states. However, in 1996 Texas farmers planted about 37 percent of the total U.S. cotton acreage while its production share was 23 percent. Marginally productive cotton areas in the Southwest will likely disappear.

For a global perspective, cotton growers in the United States produced about 22 percent of the world's 86 million bale crop in 1996. American textile mills, however, used only 13 percent of the 85 million bale disappearance.

## Implications for Cotton

Reduced government support and flexibility to plant alternative crops raise several issues that will be addressed by the cotton industry. These include:

- The effect of planting flexibility, variable prices, and reduced government support on stability of income.
- Economic pressure on industry structure to cope with income risk.
- Comparative advantage and regional competitiveness.
- Landlord/tenant negotiations and land values.

## Income Stability

One of the major reforms is the move toward greater flexibility in production decisions. While this flexibility will allow the market more latitude in directing planting decisions, it will likely result in greater price risk on

industry segments as producers choose among alternative crops in a more uncertain economic environment.

Producers and other agribusinesses in the cotton sector will seek alternative means of reducing the increased risk exposure. Market power issues will likely become more prevalent as those with the potential to pass on risk will likely do so. Producers who have in the past specialized in production, while somewhat insulated from downside price risk with the help of government payments, will be increasingly exposed to price swings. Improved marketing decisions will bring considerable premiums to those adept at managing price risk. The positive impacts, however, will not be universally achievable.

Many producers and agribusinesses will not have either the managerial capability or the inclination to compete in this more risky environment. Others will continue to specialize in production and turn the marketing over to a third party. Operating entities of sufficient size to specialize effectively in both production and marketing will do so. Many, however, are likely to turn to group marketing or cooperative efforts as a means of managing price risk (Smith, et al, 1996).

### **Structural Pressure**

Farmers, as well as the agribusinesses that supply them inputs and market their products, have become increasingly concentrated throughout this century. This trend will likely be enhanced under the 1996 Farm Bill environment. As mentioned previously, decreased price and income stability will result in firms seeking to reach economies of size sufficient to internalize maximum efficiency associated with price risk reduction or vertically integrating through group activities. The bottom line is a more concentrated agriculture.

Increased flexibility at the regional level will place pressure on firms dependent on volume from a specific crop such as cotton. Shifts to grains, oilseeds or other alternative crops that prove more profitable in a single year could play havoc on agribusiness with market areas defined at regional levels, especially if single crop dependent. Cotton gins, for example, are of little use in processing and storing grains or oilseeds. Conversely elevators do not lend themselves to cotton processing in years where cotton is the market commodity of choice.

Cotton gin operations are particularly vulnerable to reduced cotton production. Some of the more dominant cotton regions with a comparative advantage like the Southeastern states will probably expand production. Likewise, areas that have a high relative production cost, such as the West and Delta states, are likely to switch from cotton to grain or forage because of less financial risk. Planting flexibility will affect gins over a wide area of the Cotton Belt.

The larger gins with modern equipment and a large volume have an economic advantage when utilization rates are relatively high. They also fair a little better in per bale costs than gins with lower capacities. The smaller gins will encounter the greatest financial hardships under the uncertainty of available cotton to gin.

Another likely development under the changes in production of crops from year-to-year is the economic necessity for longer ginning seasons. The greater utilization of capital invested in the gin reduces fixed costs per bale. Also, more producers will become ownership partners in gins, either privately or through a cooperative arrangement.

If economic incentives discourage cotton production in a given area for several years, all or most gins in an area will be forced to close. When an area is without feasible ginning capacity, cotton production may cease.

Economic examples of different size, age and volume of gins indicate the lowest cost per bale for maximum utilization. Gin one, estimated at 21 bales per hour, shows about \$43 per bale total cost at full utilization, \$49 at 70 percent, and \$81 at 30 percent use. Gin three, a remodeled and expanded gin, estimated at 31 bales per hour, reflects a higher per bale cost at 100 percent use of \$47 per bale, \$58 at 70 percent, and \$104 at 30 percent use (Table 1). The smaller gins 2 and 4, estimated at 13 bales per hour, have higher per bale costs at all levels of utilization. The new Farm Bill will accelerate the consolidation of gins and continue to encourage the building of faster and larger gin plants (Table 2).

Will there be investments in gins in this uncertain environment? The answer is yes. Will the firms likely be larger and capable of serving a larger geographical region? Again the answer is yes as a means of geographical insurance. The results of this pressure is increased concentration in agribusiness. A similar story could apply to lending, input supplies, and other value-added processors as they seek to reduce the regional volume uncertainty inherent in full flexibility.

### **Regional Competitiveness**

When net returns are measured relative to the variable input cost required to produce the crop, the Southern Plains and Southeast appear most competitive among the southern cotton producing regions. A similar story was revealed in selected farm analysis for those regions analyzed.

The flexibility issue is an interesting one for producers, lenders, other agribusinesses and economists. What will be produced in these regions if producers are given increased ability to respond to markets? At first blush analysts look at returns per acre in whole farm systems and may conclude that the farm will plant the crop that returns the most to the fixed inputs, management and risk given production constraints.

Utilizing net returns per acre, cotton appears competitive with major alternative crops in the Southern Plains, Delta and Southeast. However, when returns are denominated by their cost of production, cotton falls to the bottom in each region. Low variable input crops such as wheat and soybeans prevail when per acre returns are compared to the cost of production that must be put at risk to achieve these returns. Although crude, this simplistic analysis may suggest greater movement out of cotton in the major production regions than might otherwise be anticipated. Certainly the mix within each region will likely become more volatile each year given price expectations. This further supports the stability issues addressed earlier in the paper.

### **Landlord/Tenant Relationship**

With a seven year contract as a requirement for receiving transition payments, landlords, and tenants find themselves in unfamiliar territory relative to past negotiations. The issue centers around how the transition payment is to be distributed. Current language instructs USDA to be fair and equitable in protecting both landlords and tenants.

Since the majority of leased land in the U.S. is contracted based on single-year verbal agreements, they rely on the good faith of the parties involved. The multi-year nature of the transition payment could change this tradition depending again on the degree to which the USDA/FSA allows landowners/tenants to negotiate transition payment shares.

In any event, the decoupling of transition payments, expected decline in market prices, and increased income risk will likely place downward pressure on the price of farmland. As a result, traditional rental agreements may need to be revised under conditions of the 1996 Farm Bill.

### **Conclusions**

No doubt, the provisions of the 1996 Farm Bill will increase the flexibility of producers to respond to market signals. However, the financial risk will increase because of production and price uncertainties. The alternative grain and soybean crops will gain increased attention in evaluating production and price risk. The infrastructure of agribusiness and rural communities will need to adjust to cope with greater economic instability. The cotton specific operations of gins and smaller warehouses will have financial problems associated with the risk of lower volumes and reduced utilization of capital investments. On the other hand, the larger cost efficient gins will have even a greater economic advantage than under the past farm programs.

The pressure to manage market risk internally will encourage more integration of production and marketing activities. The result will lead to a greater concentration in agricultural businesses and a possible change in the market

structure for cotton. A multi-year contract on transition payments from the government will likely cause a considerable realignment in the traditional landlord/tenant relationships. Further, land values will likely weaken as farm earnings are squeezed between increasing production costs and highly variable and uncertain cotton prices.

Cotton producers in the United States have the capability to increase production substantially. But, the economic incentive must be favorable to offset the large capital outlays and risk in cotton production. Past farm programs have assisted in providing income stability and rigorous price competition against man-made fibers and to maintain exports. With higher cotton prices, synthetic fibers could become more price competitive. Furthermore, foreign growers with various levels of state support and low labor costs might increase their share of the international market.

In the future, acreage recovery depends on favorable price incentives, cost effective production, less foreign production and subsidies, competitive price with synthetic fibers, improved quality, a cost efficient marketing system, and increased world demand. Harsh economic reality between costs and cotton prices will determine acreage planted and greatly influence production and the U.S. industry's future.

### **References**

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Table 1. Example: Per Bale Costs Compared for Two Gins Over a 30 to 100 Percent Utilization Rate.

Utilization Rate	Gin 1	Gin 3
	Per Bale Cost (\$)	
100 Percent	42.61	47.36
90 Percent	44.20	49.96
80 Percent	46.27	53.26
70 Percent	49.10	57.54
60 Percent	52.95	63.32
50 Percent	58.48	71.48
40 Percent	66.84	83.78
30 Percent	80.99	104.40

Gin 1 = 38,000 bales per season, 21 bales per hour  
 Gin 3 = 48,000 bales per season, 31 bales per hour

Table 2. Example: Per Bale Costs Compared for Two Gins Over a 30 to 100 Percent Utilization Rate.

Utilization Rate	Gin 2	Gin 4
	Per Bale Cost (\$)	
100 Percent	48.19	54.67
90 Percent	50.03	57.25
80 Percent	52.46	60.65
70 Percent	55.70	65.12
60 Percent	60.22	71.12
50 Percent	66.69	78.92
40 Percent	76.08	90.48
30 Percent	90.79	110.00

Gin 2 = 25,000 bales per season, 13 bales per hour  
 Gin 4 = 19,000 bales per season, 13 bales per hour