

Cotton Forward Contracting Performance in 1980-84

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An article in the 1982 issue of this report summarized the performance of forward contracting by Arizona cotton growers for the six years of 1974 through 1979. This is an update for the following five years.

Several cotton ginning companies who act as agents in forward contracting cotton that they gin provided data on forward contracts. Since not all cotton gins in Arizona provided data and from 40 to 50 percent of the cotton ginned is marketed through cooperatives, the basic data collected was treated as a sample of all the cotton grown in Arizona.

Farmers who are members of marketing cooperatives are required to deliver all of their production to their cooperatives and not free to forward contract in the same way as farmers who are not members of cooperatives. However, cooperative members have alternative marketing programs that allow results similar to forward contracting.

Estimates were made of the number of bales of cotton in the reporting gins available for forward contracting for each year. In this study it is assumed that cotton ginned in gins not supplying data was forward contracted and members of cooperatives used their equivalent of forward contracting in the same proportions as contracting of the reporting gins of non-cooperative members. This provided a basis for estimating the total impact of forward contracting.

The standard for measuring the performance of forward contracting is to assume that cotton, if not forward contracted, is instead sold in the Phoenix spot market at the average price in the calendar week that includes December 1.

Further insight into performance of forward contracting can be gained by dividing the marketing period for each crop into four sub-periods. The four time periods are defined as follows:

Preplanning-period ranges from April through November before the crop is planted.

Planning-period is December through February before the crop is planted.

Planting-period is March through the first week of June.

Growing-period is from the end of the planting-period through ginning of the cotton.

Table 1 shows estimates that the weighted average forward contract price for the preplanning-period for the 1980 crop was 17.47 cents below the spot market price of early December. Of all the 1980 crop cotton forward contracted, the weighted average price for forward contracted cotton is estimated to be 8.07 cents below the the early December price. The 1981 forward contracted cotton sold at a weighted average price 26.81 cents above the spot price available in December.

For the entire 1980-84 period, it is estimated that forward contracting raised the price of forward contracted cotton by nearly 2 cents per pound. It is estimated that forward contracting in the preplanning period had more impact in raising the selling price of cotton that was forward contracted than each of the other three defined periods.

Table 1. Weighted Average Price Improvement from Forward Contracting Over Spot Market Sale in Early December

Year	Preplanning period	Planning period	Planting period	Growing period	All contracts
	----- cents per pound -----				
1980	-17.47	-12.80	-7.92	-2.20	-8.07
1981	26.93	27.82	26.17	15.74	26.81
1982	9.15	8.63	10.75	11.69	10.75
1983	---	-11.88	-4.22	2.92	-1.83
1984	10.37	9.01	12.30	3.12	10.26
1980-84	10.41	-6.12	6.28	.55	1.96

Table 2. Estimated Percentage of Each Year's Crop Forward Contracted in Each Period

Year	Preplanning period	Planning period	Planting period	Growing period	All contracts
	- - - - - percent of crop - - - - -				
1980	4.3	22.1	4.8	24.6	55.8
1981	5.8	2.1	1.5	0.2	9.5
1982	0.4	2.0	22.1	5.2	29.7
1983	0.0	0.0	1.8	0.9	2.7
1984	0.8	3.3	12.6	3.0	19.9
1980-84	2.6	6.8	10.5	8.5	28.4

Table 2 show the estimates of the proportion of each year's cotton crop that was contracted in each of the four sub-periods. The 1980 crop had higher proportions of forward contracting than any of the following four years. 1983, the year of the PIK program, had only relatively small amounts of forward contracting. The planting period showed higher proportions of forward contracting than the other periods for the five years combined. It is estimated that 28.4 percent of the total cotton sold in the 1980-84 period was sold on forward contract or equivalent in cooperatives.

Table 3 presents estimates of the impact of forward contracting on the value of all cotton sold in the 1980-84 period. The cotton that was forward contracted in the planning period of the 1980 crop reduced the value of all cotton in the period by about two-thirds of a cent. Cotton that was forward contracted in the planting period of the 1982 crop raised the value of all the 1980-84 crops of cotton by nearly one-half cent.

Of the four defined periods for each crop, forward contracting in the planting period had more total impact in raising the value of all 1980-84 crop cotton than each of the other periods. This contrasts with the study of the 1974-79 period when the planting period reduced the value of the cotton for the entire period more than each of the other periods.

It is estimated that all of the forward contracting in the 1980-84 period had the net effect of raising the value of all cotton sold in the period by more than one-half cent per pound. This translates into more than 16 million total dollars. The study for the 1974-79 period found that forward contracting in that period raised the average for all cotton sold in the period by one cent per pound.

Table 3. Weighted Average Price Improvement from Forward Contracting as Distributed Over All Cotton Harvested in Arizona in the Years 1980-84

Year	Preplanning period	Planning period	Planting period	Growing period	All contracts
	----- cents per pound -----				
1980	-.17	-.66	-.09	-.13	-1.05
1981	.42	.15	.10	.01	.68
1982	.01	.03	.45	.11	.60
1983	---	-.00	-.10	.03	-.06
1984	.02	.06	.29	.02	.38
1980-84	.27	-.42	.66	.05	.56