



## Farm Bill Review: Historic Fixed Price Policy and Costs of Production

**Jonathan Coppess, Nick Paulson and Gary Schnitkey**

Department of Agricultural and Consumer Economics  
University of Illinois

**Carl Zulauf**

Department of Agricultural, Environmental and Development Economics  
Ohio State University

March 8, 2018

*farmdoc daily* (8):41

Gardner Policy Series

---

Recommended citation format: Coppess, J., C. Zulauf, N. Paulson, and G. Schnitkey. "Farm Bill Review: Historic Fixed Price Policy and Costs of Production." *farmdoc daily* (8):41, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, March 8, 2018.

Permalink: <http://farmdocdaily.illinois.edu/2018/03/farm-bill-review-historic-fixed-price-policy.html>

---

This article continues the discussion regarding fixed-price commodity policies in farm bills by comparing early target prices and costs incurred by farmers to produce supported crops (*farmdoc daily*, Feb. 22, 2018). The discussion in this article uses the historic Commodity Cost and Return estimates by the USDA Economic Research Service for corn, cotton and wheat for 1975 through 1995 (USDA-ERS Commodity Costs and Returns).

### Background on Costs of Production

Pegging commodity assistance to the cost of production was one of the major issues from the beginning. In fact, the Congressional debate over the legislation that became the Agricultural Adjustment Act of 1933 became bogged down in the Senate over this dispute. The National Farmers Union (NFU) and Senator George Norris (R-NE) fought for a support calculation based on a cost-of-production calculation but they were opposed by the American Farm Bureau, the Roosevelt Administration and Southern Senators who wanted to peg supports to a ratio of prices and costs that used the 1909 to 1914 base period (Coppess 2018). The 1933 AAA ended up using the 1909-1914 base period ratio, which would eventually come to be known as parity, but the battle over using cost of production calculations continued. Challenges and concerns have always enveloped the cost of production calculation; questions about how to calculate costs, which costs to include in the calculation and whether costs (however calculated) are an appropriate basis for assistance.

The USDA-ERS Cost and Return data provides total economic costs of production, which includes variable cash expenses, general farm overhead, taxes and insurance, capital replacement, operating capital, other nonland capital, land and unpaid labor costs. Chart 1 illustrates the total economic costs of production for corn, cotton and wheat during the years 1975 to 1995 (per planted acre).

---

We request all readers, electronic media and others follow our citation guidelines when re-posting articles from *farmdoc daily*. Guidelines are available [here](#). The *farmdoc daily* website falls under University of Illinois copyright and intellectual property rights. For a detailed statement, please see the University of Illinois Copyright Information and Policies [here](#).

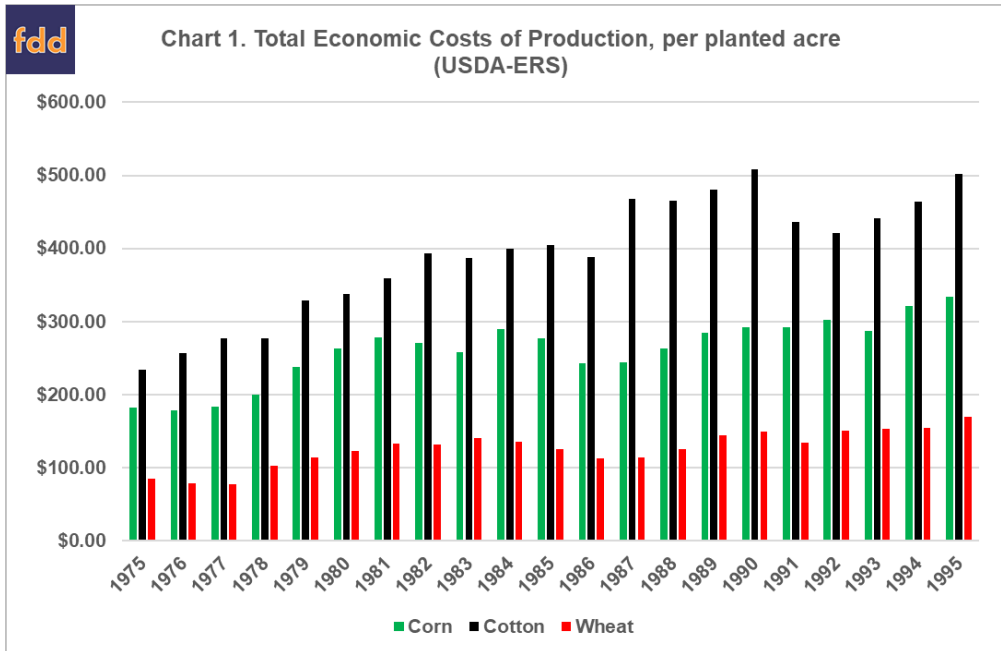
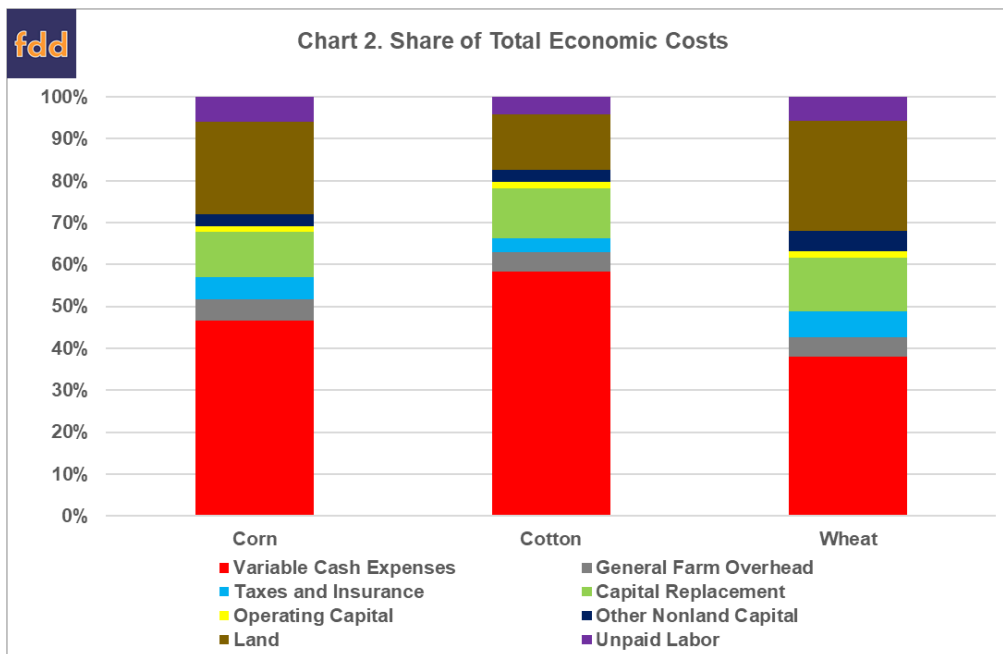


Chart 2 provides a breakdown of the costs making up the total economic costs of production. It illustrates the percentage of each of the costs averaged over the 1975 to 1995 years. For all three commodities, variable cash expenses make up the largest share, at 47% for corn, 58% for cotton and 38% for wheat. Land costs are a distant second at 22% for corn, 13.2% for cotton and 26% for wheat.



Continuing the cost comparison, Chart 3 illustrates total variable cash expenses for corn, cotton and wheat over the 1975 to 1995 years. On a per-planted-acre basis, total variable cash expenses follow the same pattern as total economic costs of production with cotton having the highest costs, followed by corn and wheat.

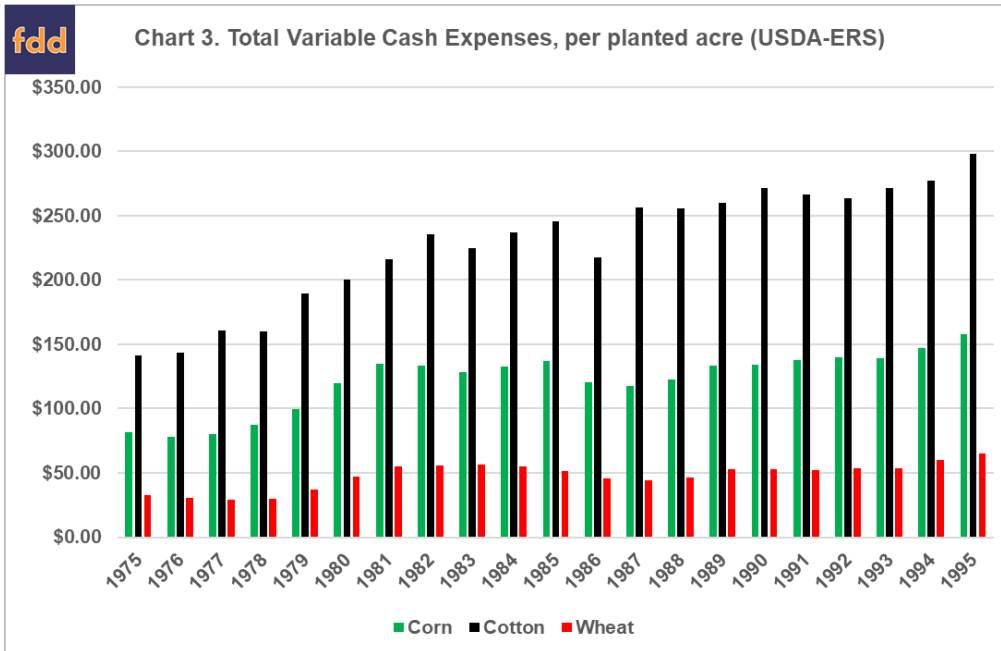
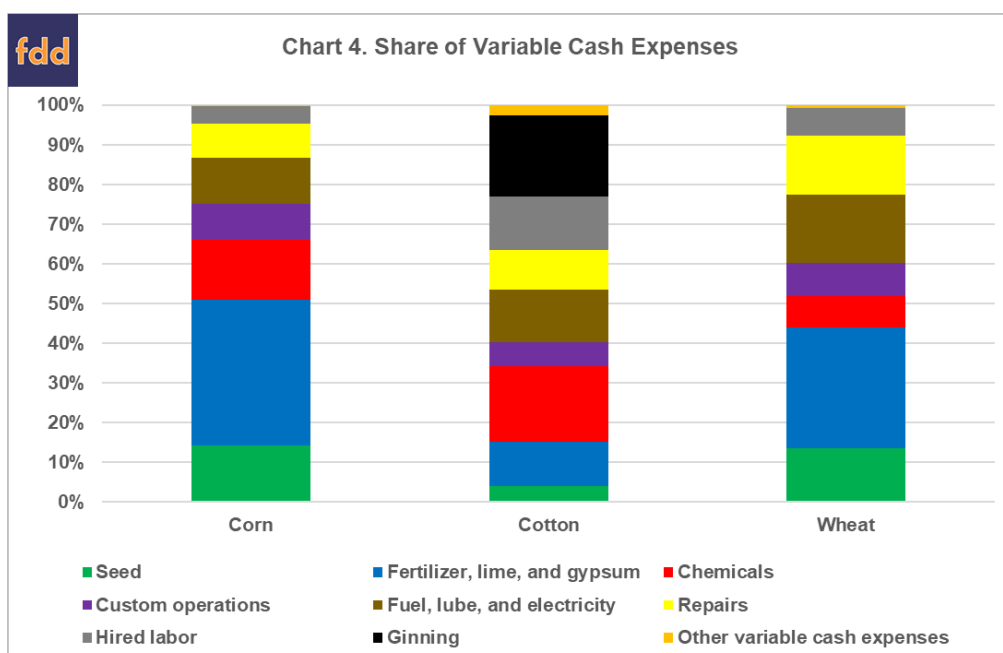


Chart 4 breaks down the variable cash expenses for corn, cotton and wheat as percentages of the total, averaged over the years 1975 to 1995. The 1975 to 1995 average variable cash expenses for corn were \$122 per planted acre, \$228.25 for cotton and \$47.96 for wheat. For corn and wheat, the direct costs for planting a crop (seed, fertilizer-lime-gypsum, chemicals) constitute 66% and 52%, respectively, of total variable cash expenses. For cotton, those expenses constitute only 34% of total variable cash expenses. Where cotton's variable cash expenses differ most noticeably from corn and wheat are the higher costs for hired labor (13%) and the inclusion of ginning costs (20%). Ginning costs are of particular interest because their inclusion raises additional questions. The first would seem to be whether ginning costs should be considered a farm production cost; whether including them is proper in general. Because they are unique to only one commodity (cotton), it follows that if ginning costs are properly considered farm production costs should the production costs for the other commodities be adjusted for analogous costs. These, in turn, raise further questions about the implications for commodity assistance policies; questions relevant in light of recent announcements by USDA to provide cotton assistance based on ginning costs (USDA, 2016 and 2018).



## Comparing Target Prices and Costs of Production

To attempt a comparison of target prices, units of output (yields) are needed; target prices are fixed on bushels-per-acre for corn and wheat and pounds-per-acre for cotton. Charts 5 through 8 use the national average yields per planted acre in the ERS data for each of the years 1975 to 1995; the comparisons use costs-per-planted-acre divided by the national average yields per planted acre. Chart 5 begins with a comparison between total economic costs of production and target prices.

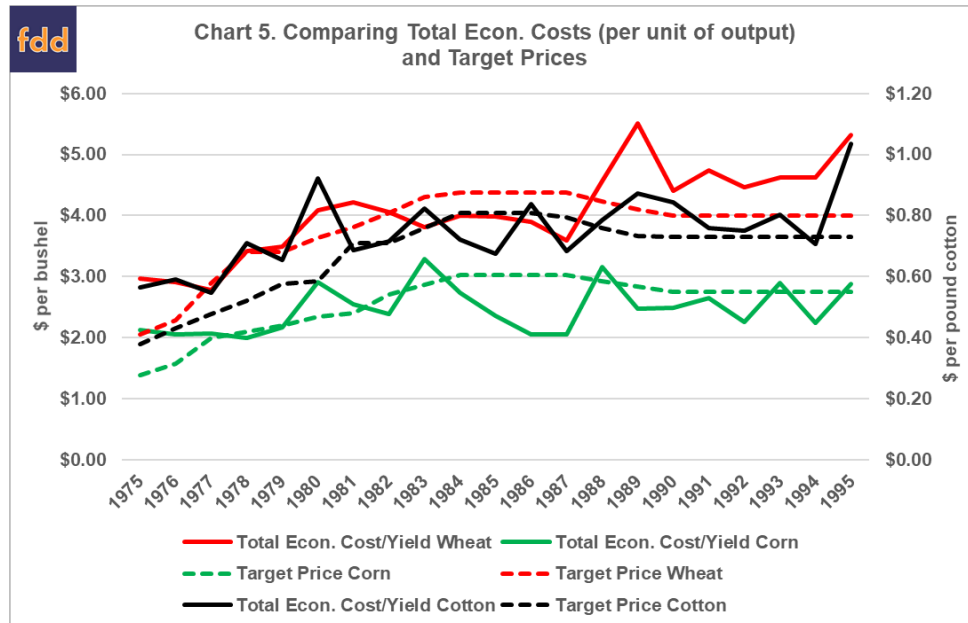


Chart 6 is the percentage obtained from dividing the target price by the total economic costs of production (per unit of output) for each year (1975-1995). Points below the 100% line indicate years where the target price was less than total economic costs of production. By comparison, points above 100% would indicate target prices that were above the total economic costs for that year. Notably, during the worst years of the farm economic crisis of the 1980s, target prices were above total economic costs of production. For example, in 1986, corn's total economic costs were \$2.04 per bushel with a target price of \$2.04 per bushel (100%). Cotton's total economic costs were \$0.70 per pound with a target price of \$0.81 per pound (115%). Finally, wheat's total economic costs were \$3.26 per bushel with a target price of \$4.38 per bushel (134%).

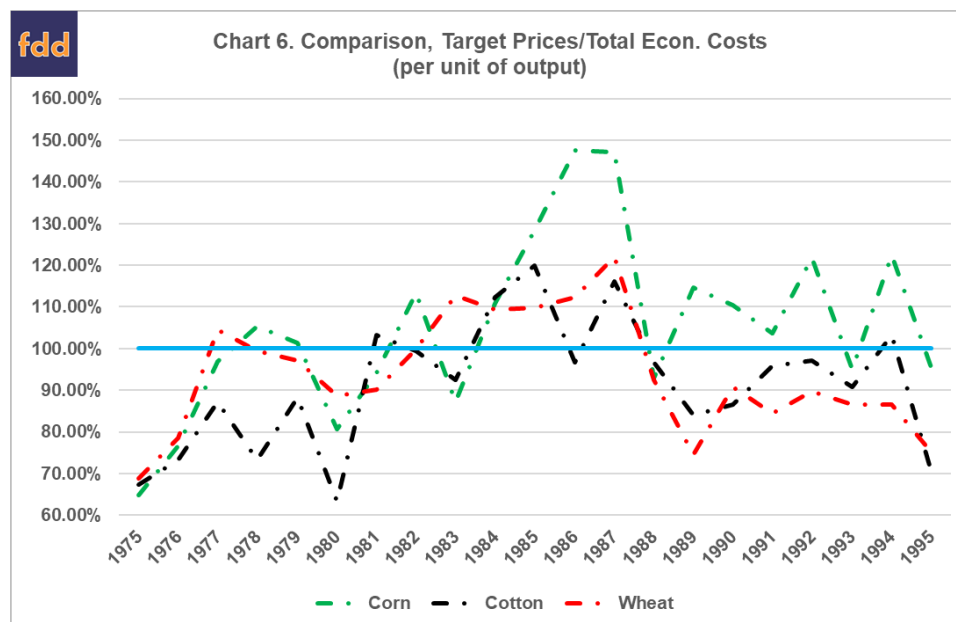


Chart 7 compares the variable cash expenses (per unit of output) with the target prices during the years 1975 to 1995 for corn, cotton and wheat.

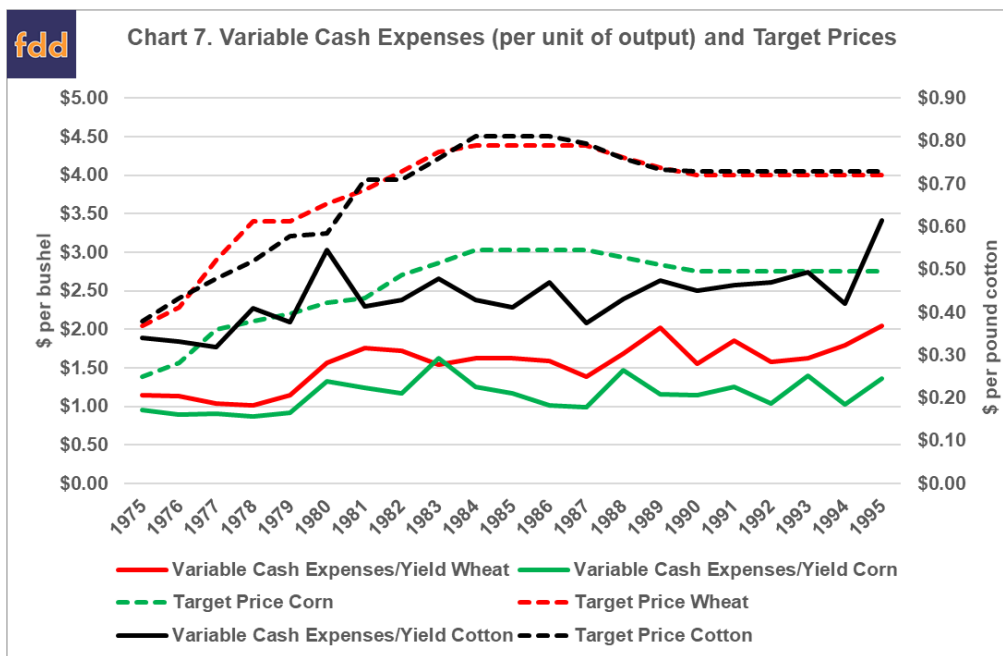
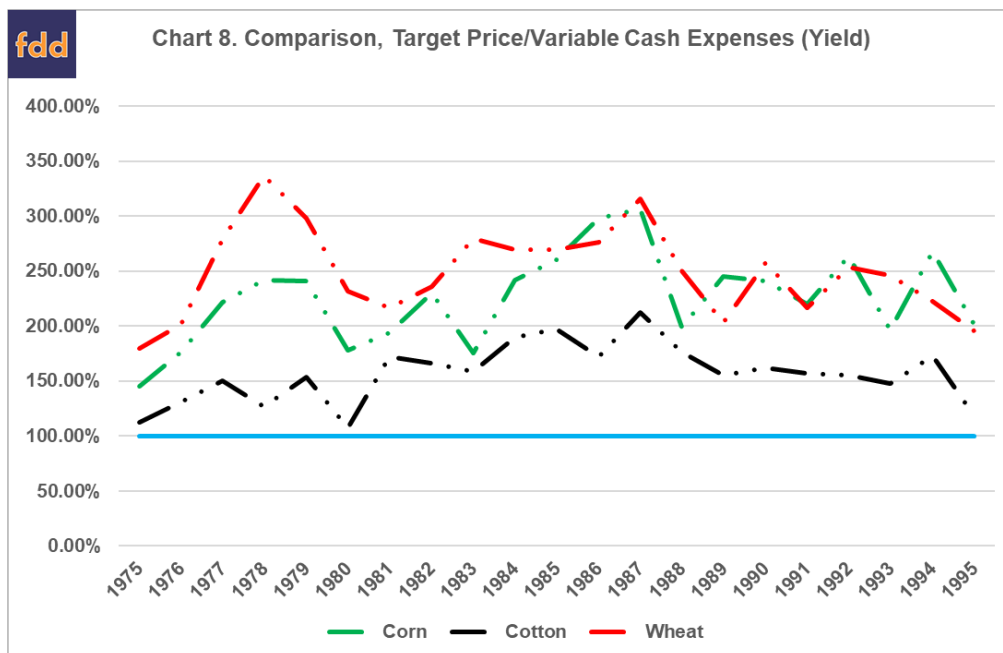


Chart 8 compares target prices and variable cash expenses for corn, cotton and wheat by dividing the target price by the variable cash expenses for each year. In 1986, for example, corn's target price \$3.03 per bushel with variable cash expenses of \$1.01 (300%) and wheat's target price was \$4.38 per bushel with variable cash expenses of \$1.33 per bushel (330%.) while cotton's target price was \$0.81 per pound on variable cash expenses of \$0.39 per pound (205%).



Finally, Table 1 provides a comparison of costs and target prices on five-year averages and an average for the entire timeframe (1975-1995). In this era, the 1977 and 1981 Farm Bills increased target prices. The 1985 Farm Bill froze target prices for the initial and decreased them in the final years. The target prices were frozen by the 1990 Farm Bill.

<b>Table 1. Comparing 5-year Averages</b>						
	<b>Economic Cost (per unit of output)</b>	<b>Variable Cash Expenses (per unit of output)</b>	<b>Target Price</b>	<b>Variable Cash Exp. as % of Total Econ. Cost</b>	<b>Target Price as % of Total Econ. Cost</b>	<b>Target Price as % of Variable Cash Exp.</b>
<b>Average 1975-1979</b>						
Corn	\$2.08	\$0.90	\$1.85	43%	89%	204%
Cotton	\$0.61	\$0.35	\$0.48	58%	78%	135%
Wheat	\$3.12	\$1.09	\$2.81	35%	90%	257%
<b>Average 1980-1984</b>						
Corn	\$2.77	\$1.32	\$2.67	48%	96%	202%
Cotton	\$0.77	\$0.46	\$0.71	59%	92%	156%
Wheat	\$4.04	\$1.64	\$4.03	41%	100%	246%
<b>Average 1985-1989</b>						
Corn	\$2.42	\$1.16	\$2.97	48%	123%	256%
Cotton	\$0.77	\$0.43	\$0.78	56%	101%	181%
Wheat	\$4.31	\$1.66	\$4.29	39%	100%	258%
<b>Average 1990-1994</b>						
Corn	\$2.51	\$1.17	\$2.75	47%	110%	235%
Cotton	\$0.77	\$0.46	\$0.73	60%	94%	159%
Wheat	\$4.57	\$1.68	\$4.00	37%	88%	238%
<b>Average 1975-1995</b>						
Corn	\$2.47	\$1.15	\$2.57	47%	104%	223%
Cotton	\$0.75	\$0.44	\$0.68	58%	91%	156%
Wheat	\$4.07	\$1.54	\$3.79	38%	93%	246%

## Concluding Thoughts

A concern with fixed-price policy—the target prices created by Congress in the 1973 Farm Bill and reauthorized in the 1981, 1985 and 1990 Farm Bills—is the lack of transparency as to how the prices are established. This lack of transparency makes it difficult to determine whether the target prices are set appropriately and whether they are equitable across commodities. Policy decisions impact whether payments are made, the size of the payments and whether farmers receiving support are receiving it on a fair and equitable basis. This could, in turn, have implications for production decisions and the market.

The costs incurred by farmers of the supported crops may provide a method for measuring target prices, as well as the policy decisions in Congress. The extent to which cost of production measures provide a reasonable benchmark for evaluating policy appears limited, however. The costs, themselves, lack transparency and raise questions about which costs are appropriate to consider and whether cost calculations are equitable across commodities. This is highlighted most clearly by the questions surrounding the inclusion of a cost unique to cotton (ginning). Reviewing costs of production adds points of reference to the evaluation of fixed-price farm policy but additional information and analysis is needed.

## References

Coppess, J., N. Paulson, G. Schnitkey, and C. Zulauf. "Farm Bill Review: Origins of Fixed Price Policy." *farmdoc daily* (8):31, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, February 22, 2018.

Coppess, J. "The Fault Lines of Farm Policy: A Legislative and Political History of the Farm Bill." U. of Nebraska Press, *forthcoming* 2018.

USDA Economic Research Service. "Commodity Costs and Returns." Updated February 14, 2018. <https://www.ers.usda.gov/data-products/commodity-costs-and-returns/commodity-costs-and-returns/#Historical%20Costs%20and%20Returns:%20Corn>

USDA. "USDA Helps Cotton Producers Maintain, Expand Domestic Market." News Releases, March 3, 2018. [https://www.fsa.usda.gov/news-room/news-releases/2018/nr\\_20180303\\_rel\\_0000](https://www.fsa.usda.gov/news-room/news-releases/2018/nr_20180303_rel_0000)

USDA. "USDA Provides Targeted Assistance to Cotton Producers to Share in the Cost of Ginning." Press Release No. 0140.16. <https://www.usda.gov/media/press-releases/2016/06/06/usda-provides-targeted-assistance-cotton-producers-share-cost>