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# How Long Will Commodity Prices Remain High?

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## **Abstract**

Participants in futures markets have money on the line and therefore have every incentive to collect and analyze as much information as possible. Academic evidence by Richard Just and Gordon Rausser at Berkeley suggests that futures-based price projections are more accurate than those created from econometric models. One problem with the use of futures contracts to project long-term prices is that there is low liquidity for contracts that trade more than three years into the future. Economists at Iowa State have developed a way to extrapolate futures prices for five or more years into the future.

## **Disciplines**

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## **Executive Summary**

Participants in futures markets have money on the line and therefore have every incentive to collect and analyze as much information as possible. Academic evidence by Richard Just and Gordon Rausser at Berkeley suggests that futures-based price projections are more accurate than those created from econometric models. One problem with the use of futures contracts to project long-term prices is that there is low liquidity for contracts that trade more than three years into the future. Economists at Iowa State have developed a way to extrapolate futures prices for five or more years into the future.

## **How long will Commodity Prices Remain High?**

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Participants in futures markets have money on the line and therefore have every incentive to collect and analyze as much information as possible. If a majority of these experts believe that the prices quoted for future delivery should be higher, then they would buy and drive the price higher. In this sense, the prices that we see quoted for futures contracts splits the experts.

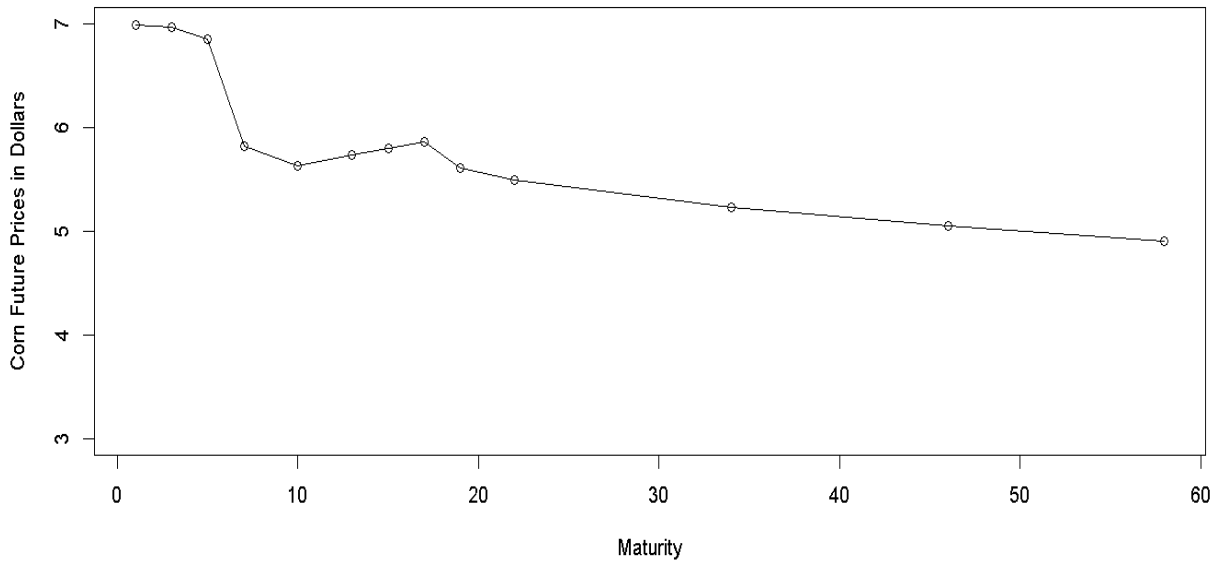
Academic evidence by Richard Just and Gordon Rausser at Berkeley suggests that futures-based price projections are more accurate than those created from econometric models.

Speculators who trade options on futures contracts are essentially trading information on the volatility of futures prices, and therefore, the implied volatility of these prices splits the experts as well. It is therefore possible to generate the distribution of futures prices using the futures price level as the mean and the implied volatility as a measure of the dispersion of these prices. This is the procedure used by the USDA RMA when setting premium levels for revenue insurance products.

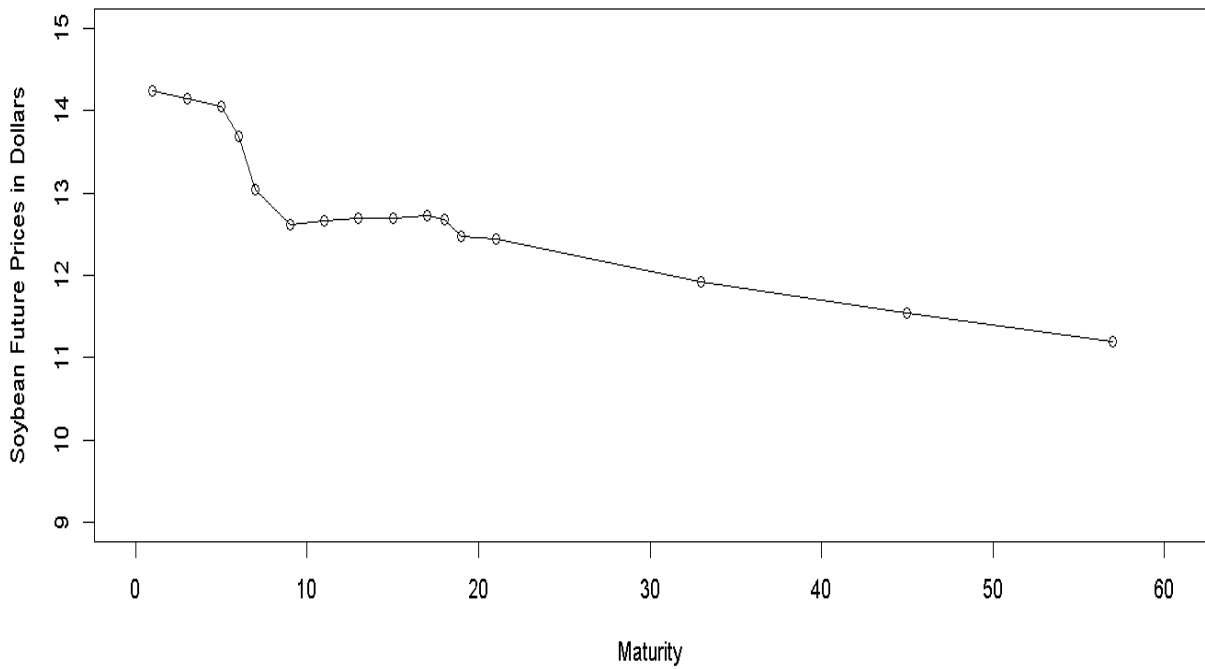
One problem with the use of futures contracts to project long-term prices is that there is low liquidity for contracts that trade more than three years into the future. Economists at Iowa State have developed a way to extrapolate futures prices for five or more years into the future (Jin, Lence, Hart, and Hayes 2012). Of course, any projected price level is subject to enormous uncertainty, and this uncertainty expands as one looks further and further into the future. This procedure developed at ISU also provides the entire price distribution.

Figures 1 and 2 show the price levels for corn and soybeans as of February 15, 2013. The projected futures price is expected to fall to a level just below \$5 per bushel by December 2017. Soybean prices are expected to fall to about \$11 per bushel by November 2017. These prices suggest that futures traders expecting continued demand growth will hold prices at what can be considered historically high levels. However, the projected prices

are substantially below current levels, indicating that traders expect world supply to expand to eliminate the current scarcity of corn and soybeans.



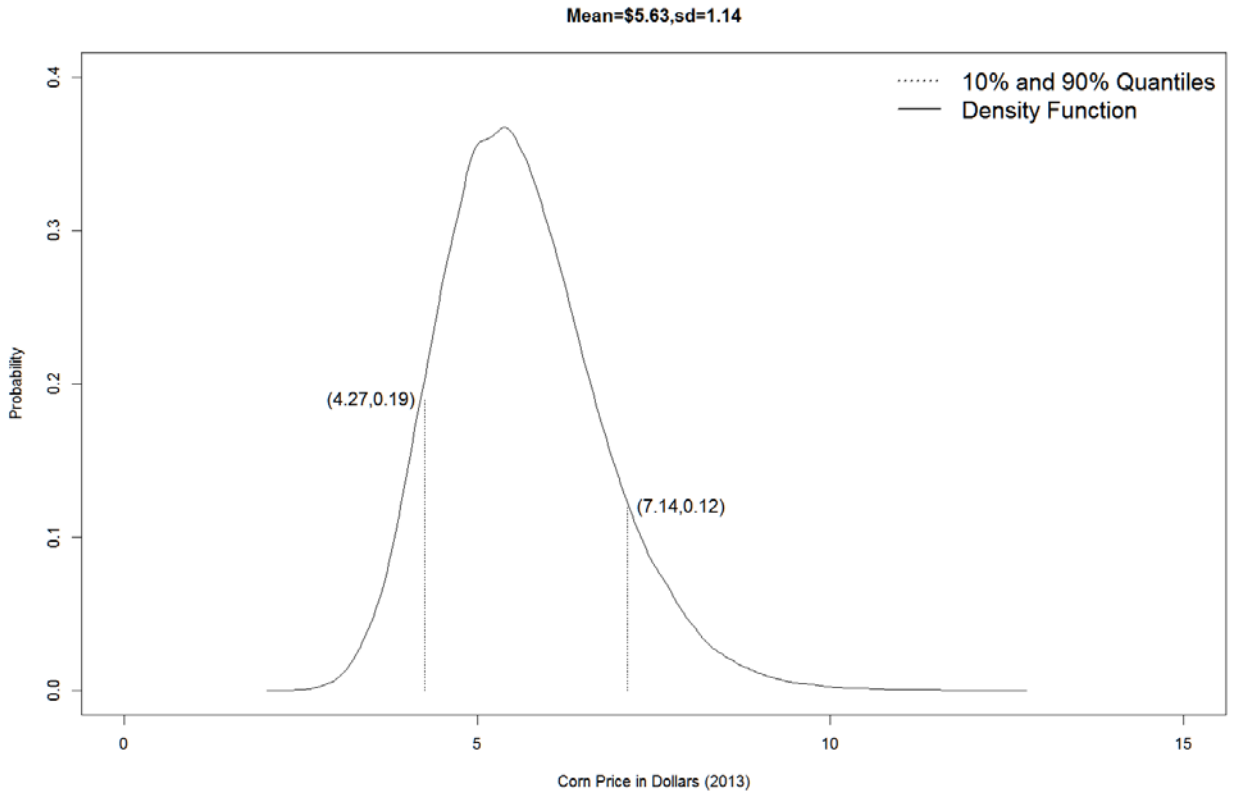
**Figure 1. Projected corn price**



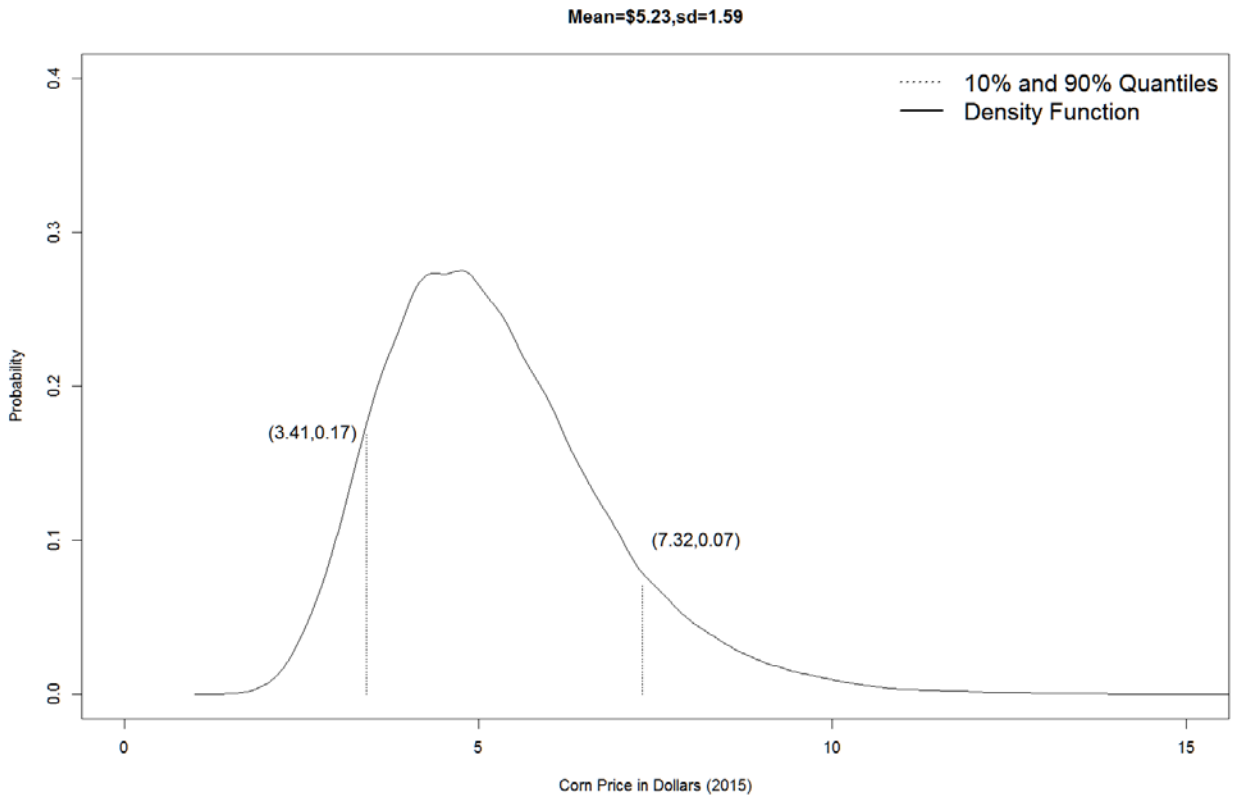
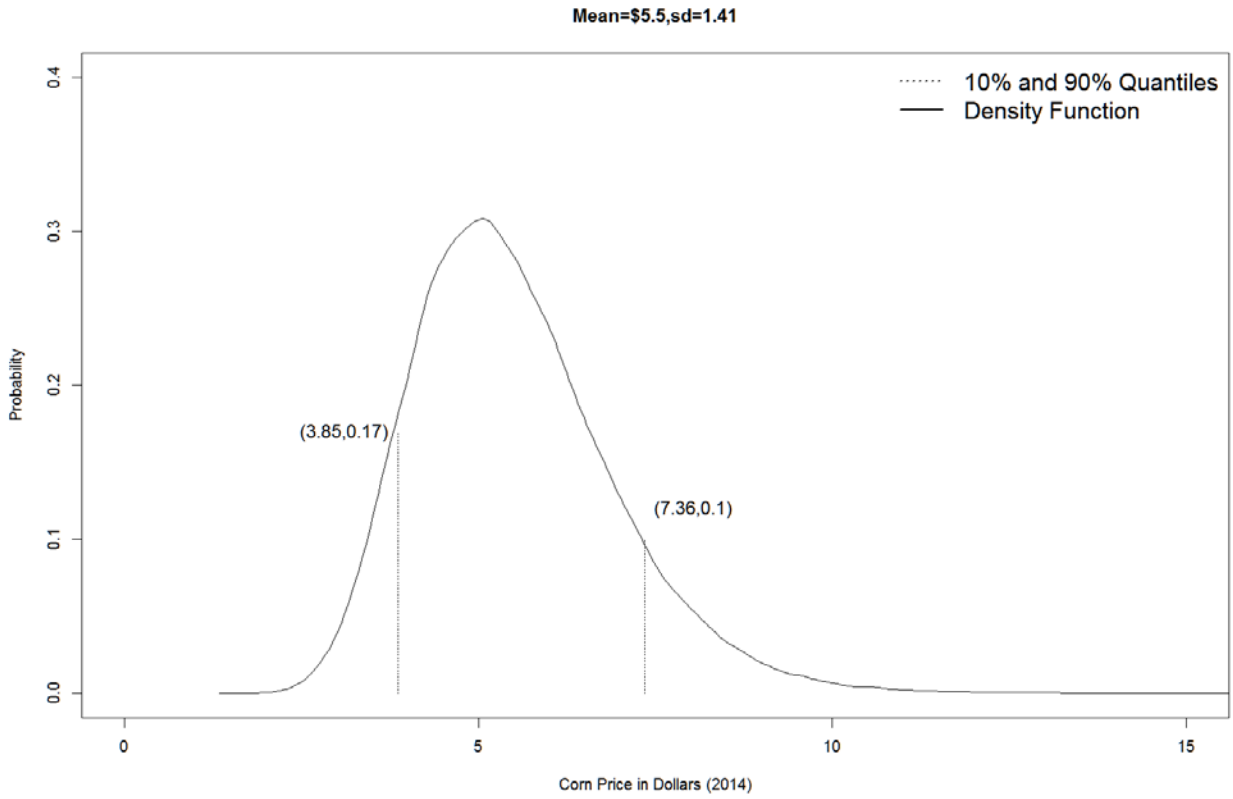
**Figure 2. Projected soybean price**

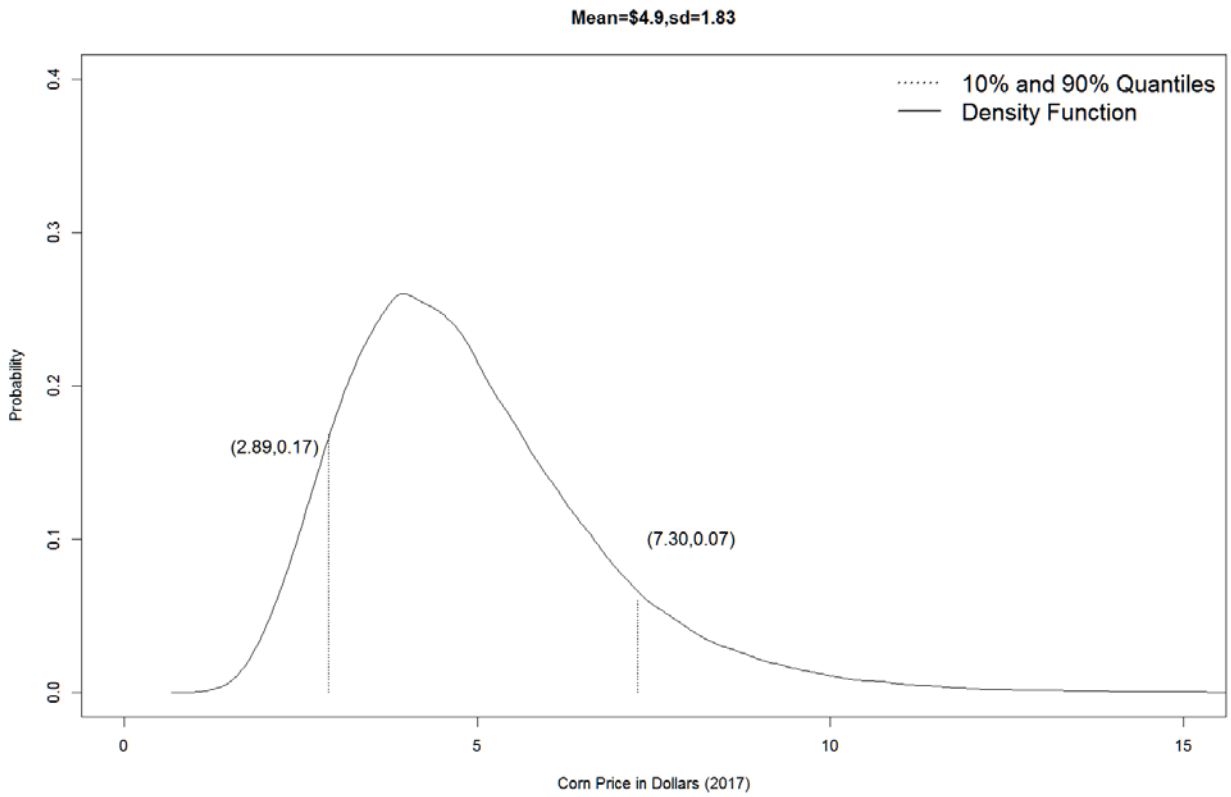
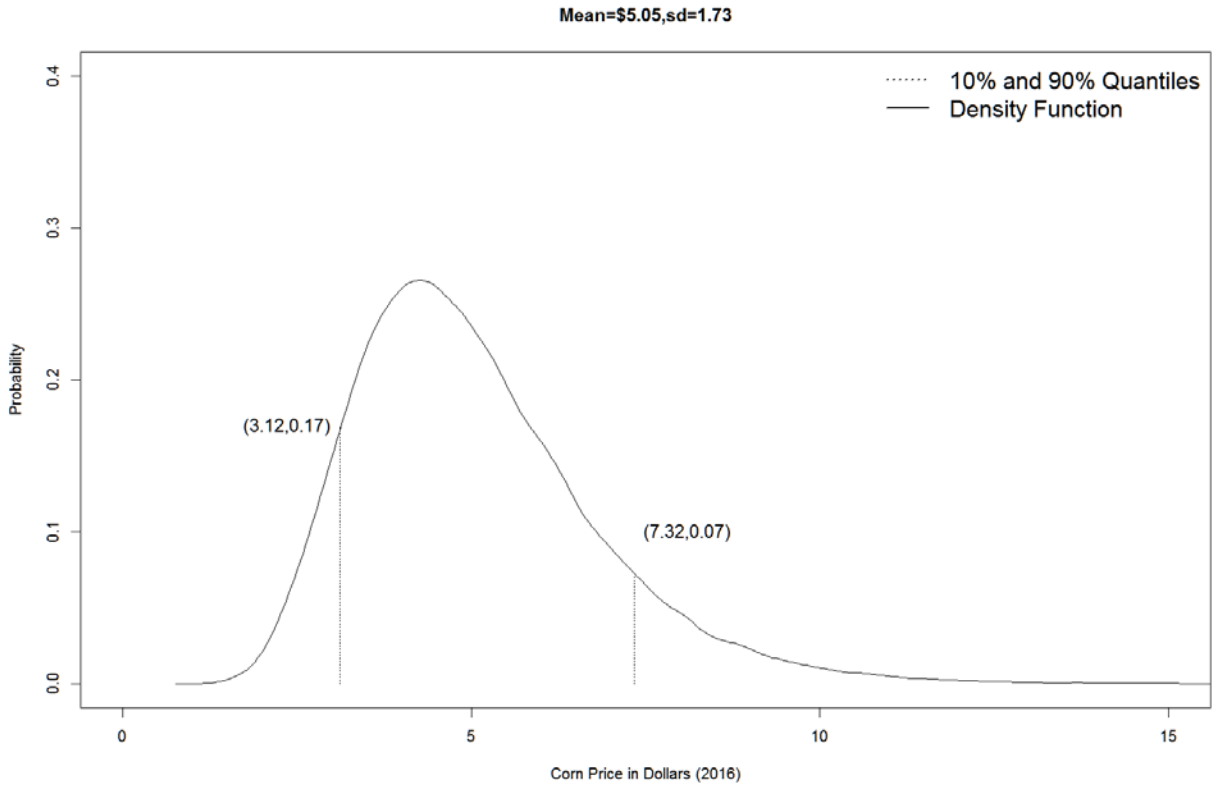
Panels 1–5 in Figures 3 and 4 show the distributions of prices that these traders expect. Of particular interest for this report is the one-in-ten year—a worst-price scenario indicated by the 10% price quantile. The interpretation of this price level is that traders believe that there is a 10% probability that futures prices will close at this level or below this level.

The one-in-ten worst-case scenario suggests a corn price as low as \$4.27 in 2013, \$3.85 in 2014, \$3.41 in 2015, \$3.12 in 2016, and \$2.89 in 2017. The values for soybeans are \$9.69, \$8.89, \$7.85, \$7.09, and \$6.55, respectively. These extremely low prices levels are unlikely, but they do give one pause.

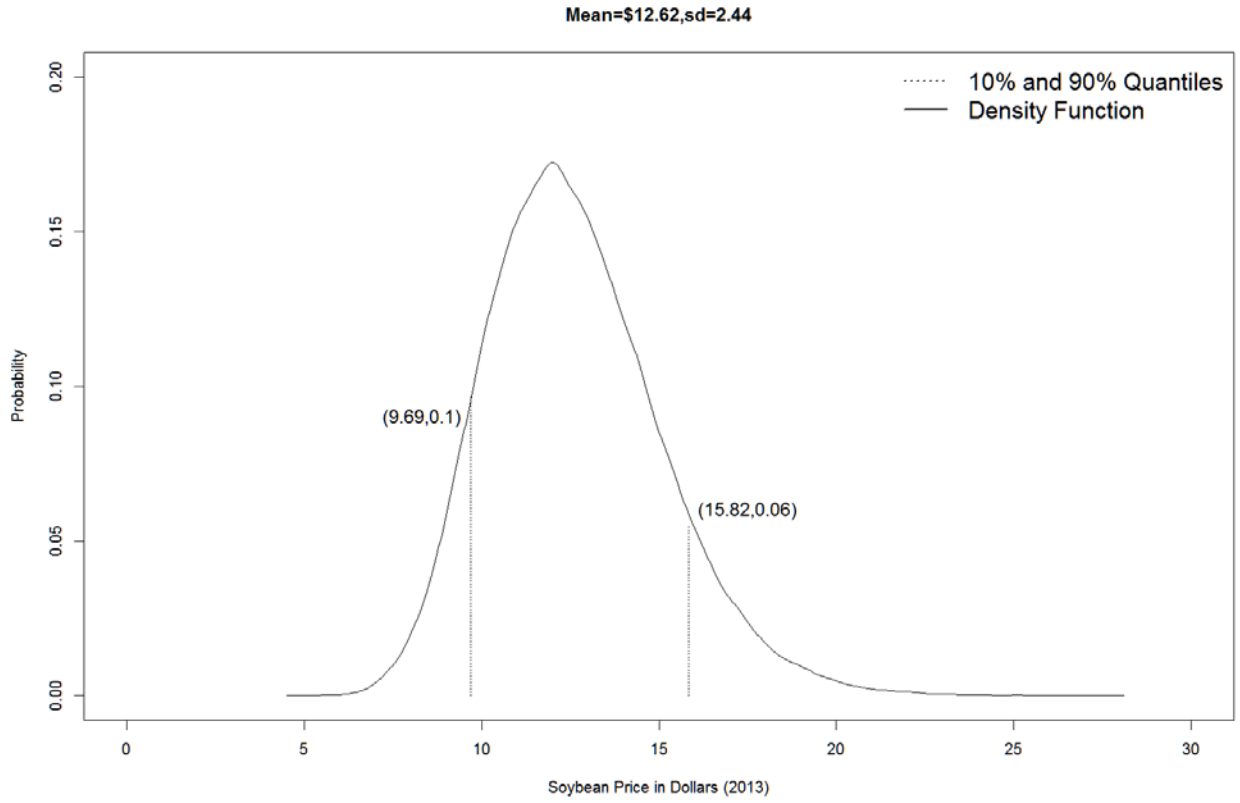


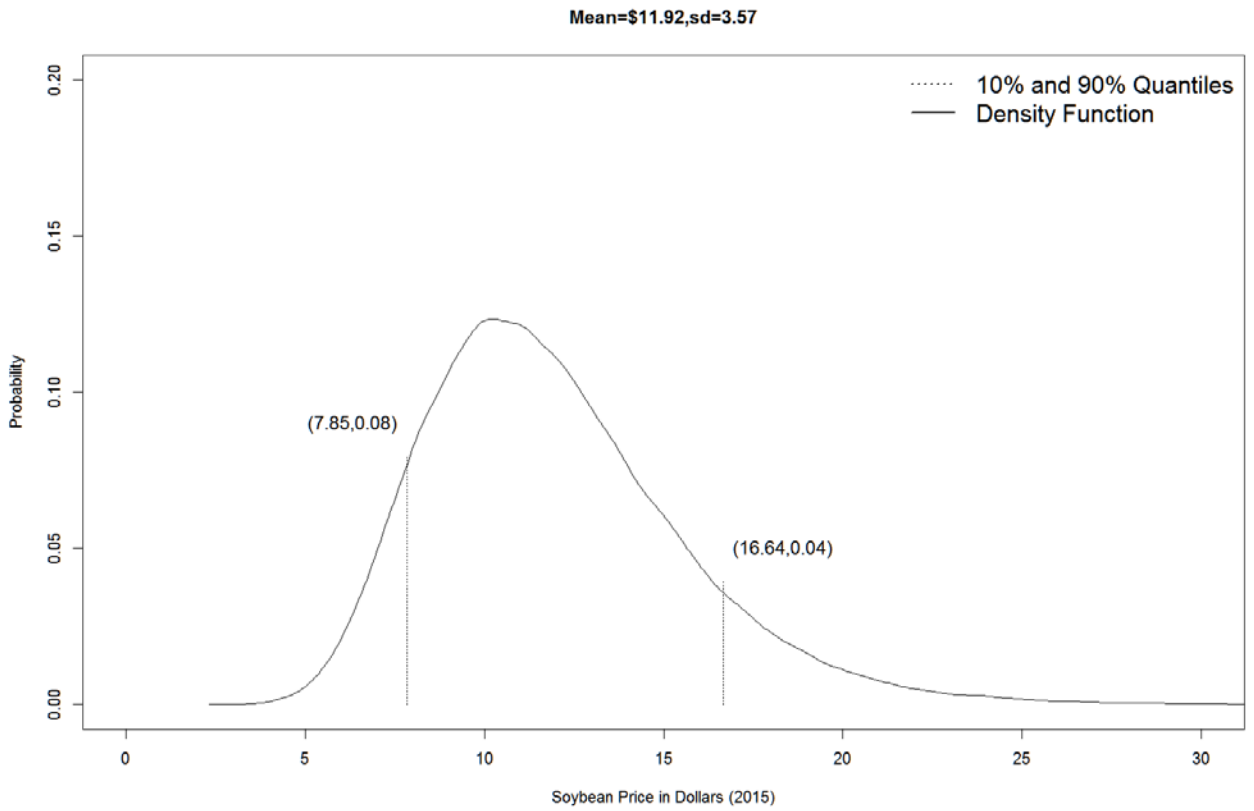
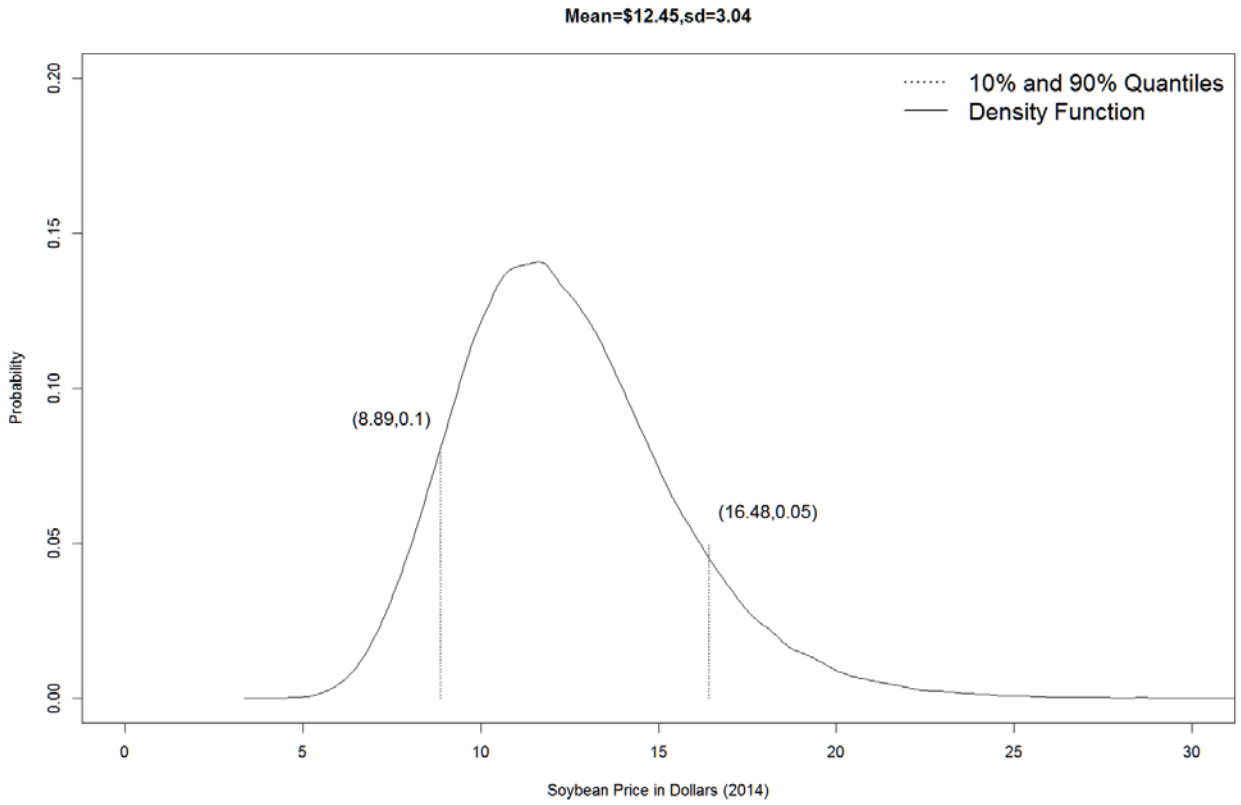


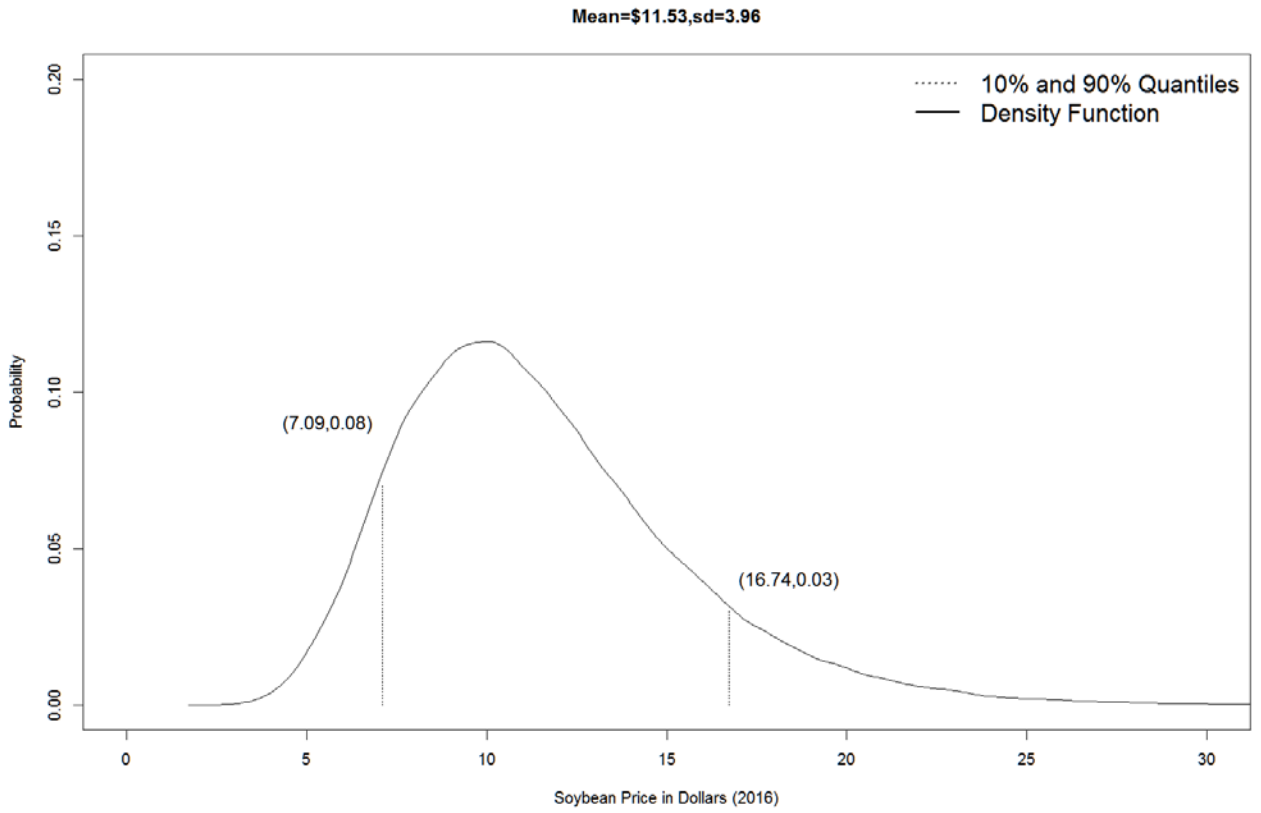


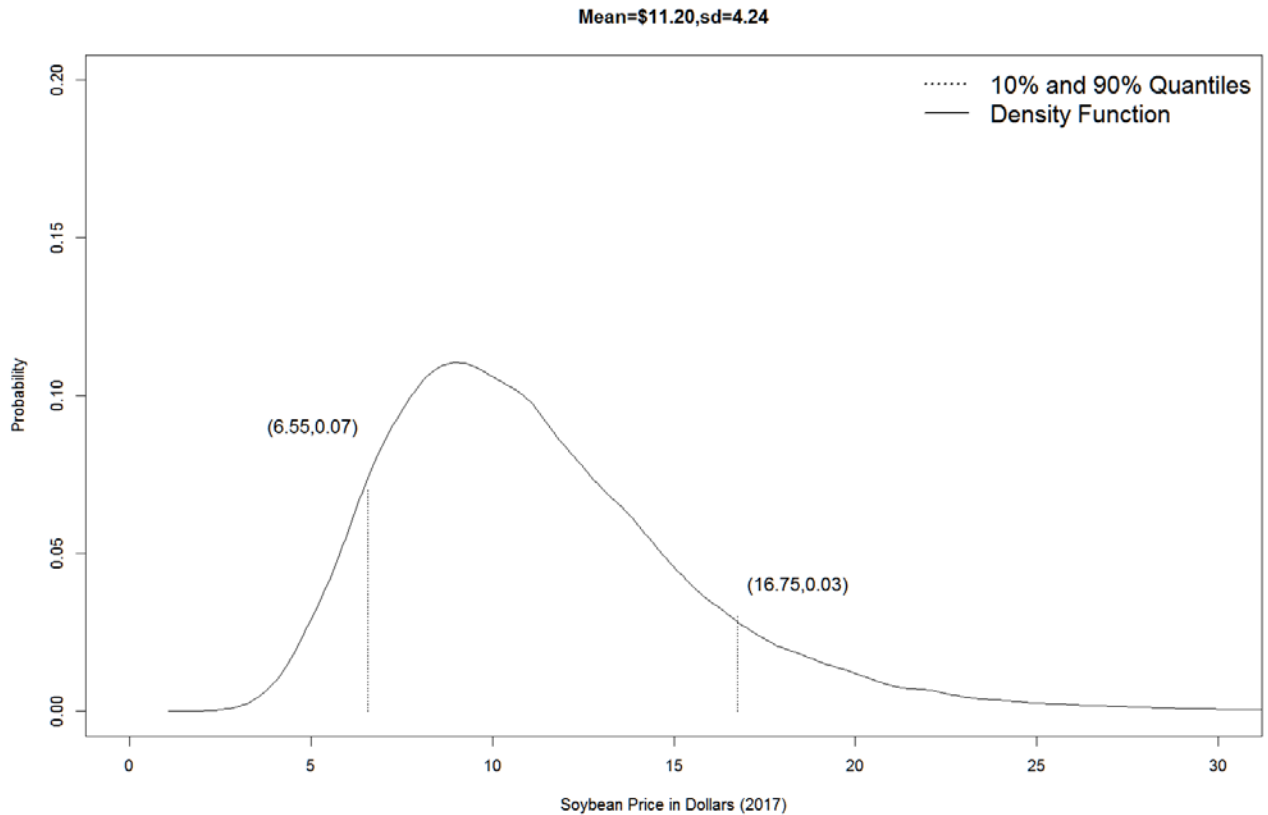


**Figure 3. Corn price distributions**









**Figure 4. Soybean price distributions**

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