

# Chapter 17

# Soybean Marketing

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ECONOMICS & UTILIZATION

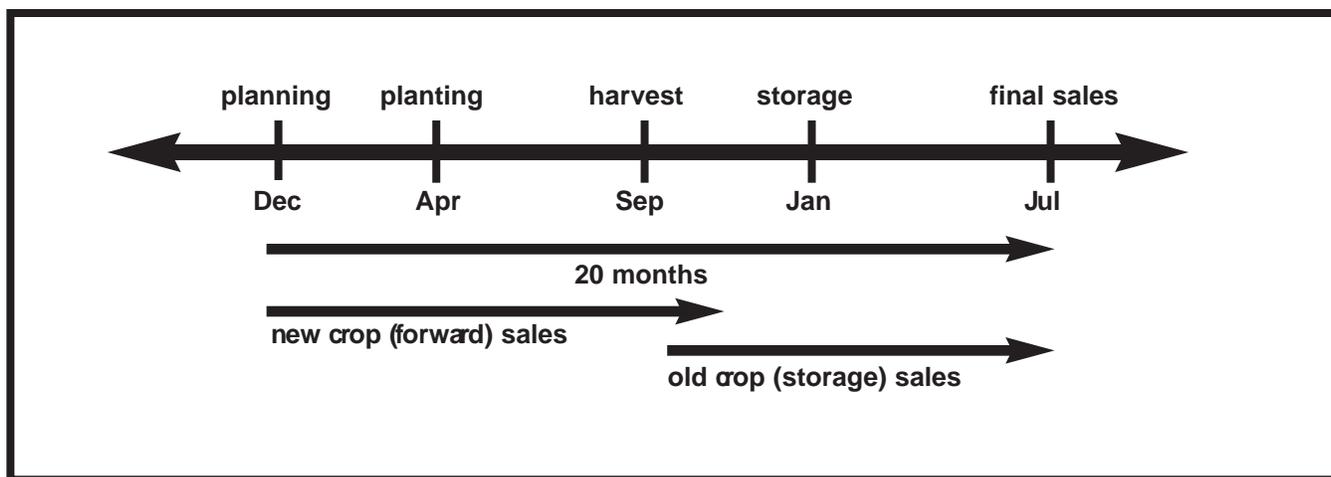
The Arkansas soybean marketing system provides producers with many attractive alternatives for marketing soybean production. Arkansas is fortunate to be located on the Mississippi, Arkansas and White River waterways which facilitate the movement of soybeans by barge for export at the Port of New Orleans. When this export demand for soybeans is combined with the needs of Arkansas soybean processors, grain terminals and elevators, the result is that state producers can generally expect to receive close to or, in some instances, above soybean futures prices for their product.

In the United States, the soybean marketing year begins on September 1 and ends on August 31. Soybeans produced for the 1998-1999 marketing year were harvested in fall, 1998. By utilizing cash, futures or options markets, soybeans may be sold for at least ten to twelve months prior to harvest and then eight to ten months after harvest. This results in nearly a two-year window which is available to sell soybeans produced in each marketing year (Figure 17.1).

The **planning** period occurs during the winter months prior to planting. During this time, it is important to focus on projected costs of production and price forecasts for the new crop. Costs of production will be affected by individual farm and field agronomic and financial characteristics. After the first of the year, private forecasts of average cash price for the new crop marketing year (beginning September 1) become available. The USDA price forecasts for the new crop year are available in the May Crop Production Report. These price forecasts can be compared with new crop forward contract prices and new crop (November) futures. If these price levels are high relative to season average price projections and projected costs of production, pricing or sales using cash, futures or options may be appropriate for a portion of the soybean crop to be grown.

At **planting time and during the growing season**, it is important to focus on costs of production, season average cash price forecasts, forward and futures prices and local basis levels. There are a number of different ways to price or sell

Figure 17.1 . Example of a 20-Month Soybean Marketing Period.



new crop production prior to harvest using cash, futures or options markets. These methods include:

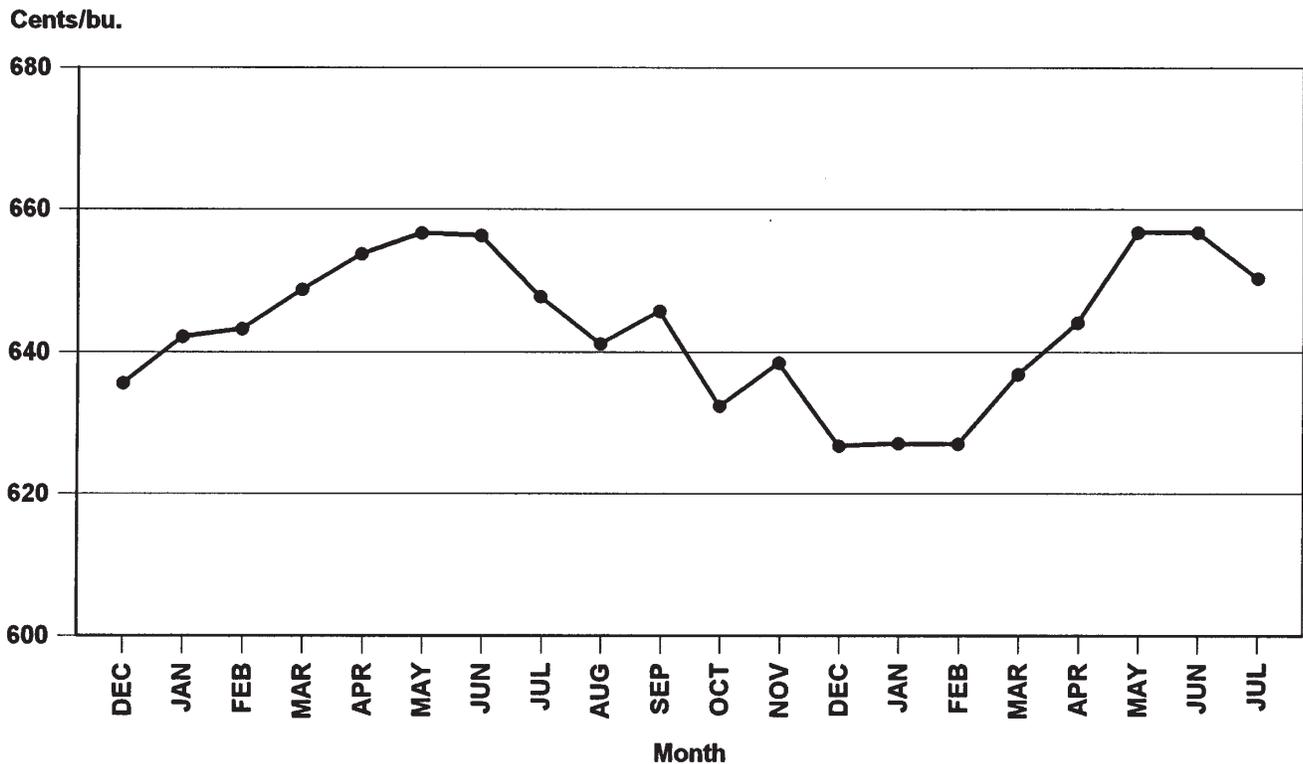
1. **Cash Forward Contracts** – Private contracts with cash buyers (elevators, processors, etc.) which specify the quantity, quality, location and time of delivery of new crop soybean production. The price which is received is the buyer's current forward price for soybeans.
2. **Hedge-to-Arrive or Short Futures Hedge** – A hedge-to-arrive contract fixes a price level for the new crop production. The price which is agreed upon is associated with a particular futures contract (e.g., November soybean futures). The producer must set the basis later. This type of cash contract is similar to a short futures hedge. With a short futures hedge, producers sell futures using a commodity broker. Later, the production is priced and the basis is set.
3. **Basis Contract** – A basis contract fixes the basis (but not price) at the time the contract is made. After harvest, basis contracts usually provide for a cash advance after the soybeans are delivered. The price level must be set prior to a specified date in the contract.
4. **Floor-Price-to-Arrive or Long Put Hedge** – A floor-price-to-arrive contract sets a price floor for the new crop production. The contract involves purchasing a soybean futures put option and the price floor will be below the current forward price by approximately the cost of the put. If prices decrease, the price which is received will be equal to the price floor. If prices increase, however, the producer is still able to sell at a higher price. A floor-price-to-arrive contract is similar to a producer purchasing a near-the-money put option from a commodity broker.
5. **Minimum Price or Long Call Hedge** – A minimum price contract sets a minimum price for the soybeans somewhere below the forward contract price. The difference is approximately the price of a near-the-money soybean futures call option. The minimum price is received upon delivery and then, if prices increase, additional money is received for the production when the price is set. If prices decrease, the producer receives the minimum price only. This type of cash contract is the same as a producer selling the production, then "buying it back" by purchasing a soybean futures call option from a commodity broker. If prices increase, the option becomes more valuable and is sold for an additional profit on the production. If prices decrease, the premium, or price paid, for the option is the maximum loss.
6. **Mini-Max or Bull Call Spread** – A mini-max contract sets both a minimum and a maximum price that will be received for the new crop production. The minimum price is higher than that which would be received from a minimum price contract. However, this increase comes at a cost – the maximum price which could be received is lower than that of a minimum price contract. An equivalent strategy which a producer could do using a commodities broker is to first sell or price the crop locally and then purchase an at-the-money or near-the-money soybean futures call and sell a higher strike call option. This also establishes a minimum and maximum price for the production.

When production is priced or sold forward prior to harvest, care should be taken to ensure that the production will actually be produced. A general guideline is that no more than 30 percent of expected production should be priced forward to allow for the possibility of low yields. Producers with soybeans in higher-risk areas (e.g., flood plains) should price less than this. Producers producing soybeans under irrigation could perhaps price more than this.

Each month, USDA and private firms update soybean supply and demand estimates. This involves new projections of supply (production and stocks) and usage (crush, exports and seed). This also implies new projections of ending stocks and the season average price. Producers should follow updates as they occur in order to be knowledgeable about realistic price goals for soybean production.

At **harvest**, decisions must be made about storing all or a portion of the crop. Again, current USDA or private predictions of average price should be considered and compared with current cash forward and futures prices.

Figure 17.2 . Average Monthly New Crop (November) Futures Prices (from December to November), Then Old Crop Cash Prices (December to July) , 1978 to 1997 Marketing Seasons.



Historically, the average price of soybeans is at its lowest yearly level during and immediately after harvest. Figure 17.2 shows average monthly prices of new crop futures (prior to harvest), then old crop cash prices (after harvest). Although there is considerable variability from year to year, forward prices for soybeans have dropped an average of about \$0.30/bu. from planting to the end of the year. After that, cash prices for stored soybeans have risen on average by about \$0.30/bu., an indication of the returns to storage.

After harvest during the **storage** period, it is again important to monitor USDA or private predictions of average price. Comparisons with current cash forward and futures prices should be made and the costs of storage should be considered.

Over the past 20 years, the period average price of soybeans for a particular marketing year was in the top third of its price range 42 percent of the time during the **planning** season (Table 17.1). It also was in the bottom third 42 percent of the time. So,

forward sales prior to planting had about an equal chance of receiving the high or low price for that year's crop.

During **planting and the growing season**, the period average price traded in the middle third of the season average price range more than 50 percent of the time. Forward sales during this time period had a better-than-average chance of receiving an average soybean price and about an equal (but lower) chance of selling at the high or low price.

At **harvest and during the winter months**, the average price for this period was never in the top third of the season average price range. In fact, the average price during this period was in the bottom third of the season average price range 63 percent of the time. Harvest sales and sales during the four to five months following harvest had a very high chance of receiving low prices for soybeans.

Soybeans stored and then sold in the **spring and summer period** when the new crop is being planted and grown had about a 42 percent chance of

Table 17.1. Percent of Time the Average Soybean Price for the Period Was in the Top, Middle and Bottom Third of the Season Average Price Range, 1978 to 1996 Crops

Period	Months	Season Average Price Range		
		Top Third	Middle Third	Bottom Third
		----- Percent -----		
Planting	December to March	42	16	42
Planting and Growing	April to September	21	53	26
Harvest and Winter	October to March	0	37	63
Spring and Summer	April to July	26	42	32

being sold in the middle third of the season average price range. Twenty-six percent of the time prices averaged in the top third, and 32 percent of the time they were in the bottom third.

Domestic and world supply and demand factors for each soybean crop changed each year and during each year. Very few years are “alike,” and it is difficult to predict when prices will be high relative to their season average price from past price data. However, it is apparent from Table 17.1 that in the past 20 years harvest and post-harvest sales resulted in lower-than-average prices being received. Storage is one way to offset this problem. However, it is not a viable option for all producers because, in many cases, soybean sales are necessary due to lack of storage or to pay expenses. Producers could consider basis, minimum price or mini-max contracts as alternatives. These contracts allow the grain to be delivered at harvest. A cash advance or minimum price is received which can be used to meet expenses.

Another way to circumvent harvest sales is to use forward sales, hedge-to-arrive or floor-price-to-arrive contracts. Forward contracts and hedge-to-arrive contracts allow price or both price and basis to be set for an agreed-upon amount of production. A floor-price-to-arrive contract establishes a minimum price for the production and also allows possible price increases to be received.

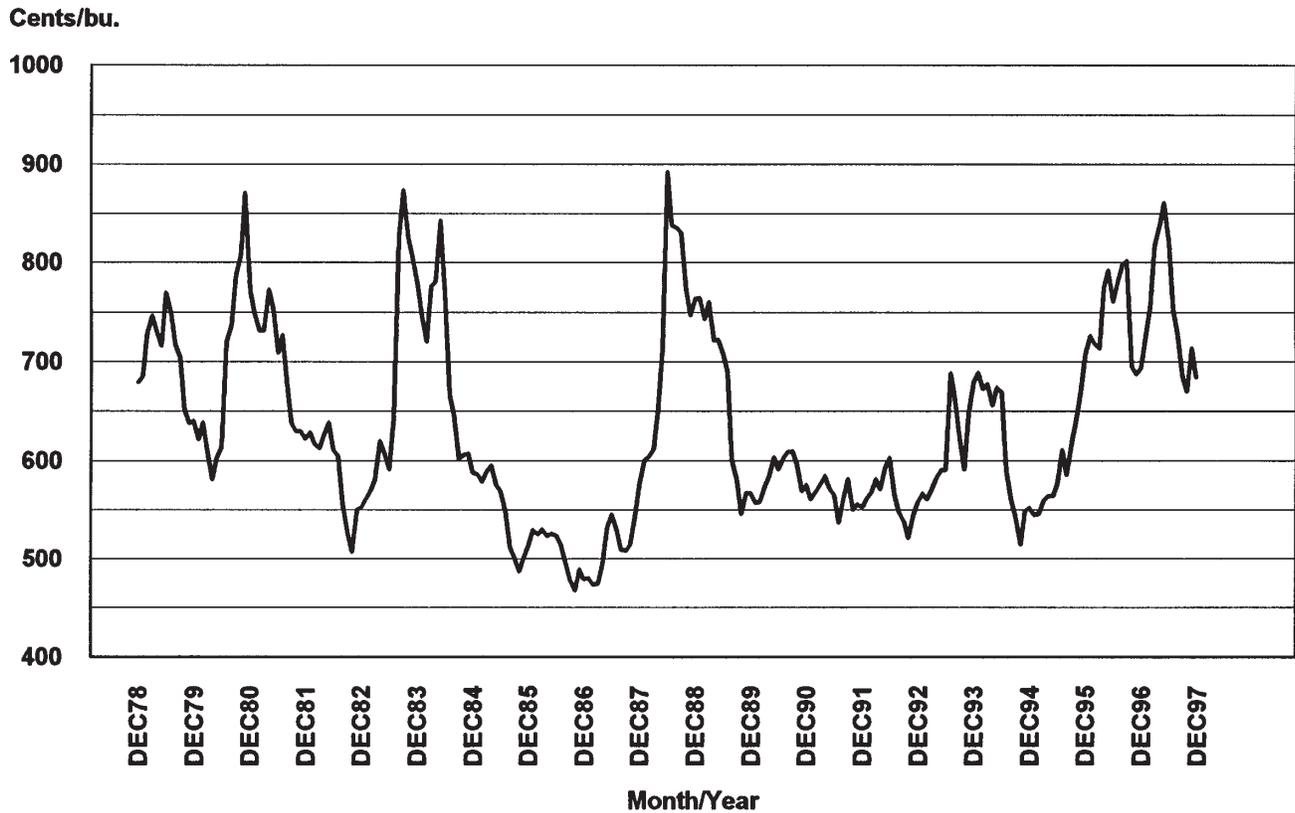
During the four different periods discussed above, there are many alternatives and opportunities for marketing soybeans. Producers should

reserve some time each week (or more often) to devote to analyzing current and potential marketing opportunities. Important information for producers can come from at least four sources:

1. **Marketing meetings** hosted by private firms or the Cooperative Extension Service. Educational meetings offer the latest information and provide important reference materials.
2. **Price and other marketing information** from farm magazines, marketing services or other media sources. Concentrate on three to five sources and check them regularly for current information.
3. **Local cash contract alternatives** available at elevators, processors or other cash commodity buyers. It is important to know where and what cash contracts are available and how they may be used when needed.
4. **Opinions from other soybean producers** on current and future price and marketing alternatives/opportunities. Consider forming or joining a soybean marketing club to regularly discuss soybean marketing with other producers.

We are in a highly volatile period of agricultural production. Demand was strong and supply was low in the 1995 and 1996 crops. However, the 1997 and 1998 soybean crops were large, and ending stocks are projected to be higher than the previous two

Figure 17.3 . Monthly Average Cash Soybean Price, December, 1978 to December, 1997.



years. Historically, cash prices have been above \$7.00/bu. for soybeans at only six different periods over the last 20 years (Figure 17.3). Two of these periods have been in the last three years.

The price of soybeans grown in the United States is heavily dependent upon supply and demand factors in the rest of the world. Nearly a third of the U.S. soybean crop is exported each year. Soybean production in the rest of the world (particularly in South America) greatly affects the demand for U.S. soybean exports. These changes in world supply, combined with changes in world demand (particularly in Asia, Europe and Mexico), are important influences on U.S. soybean prices.

As each soybean crop is marketed, it is important to keep abreast of current price information and projections. This information, when compared with the costs of production and storage, forms the foundation of producer marketing decisions. Keep in mind four things when making marketing and sales plans:

1. **Know your costs of production and storage** in order to compare to current and projected market prices.
2. **Have a price objective** and sell (pull the trigger) when it is met.
3. **Revise and review at least weekly** all cost and price information in order to update the soybean marketing plan.
4. **Avoid emotional marketing decisions** which cause decisions to be delayed or changed.

Remember, the market does not care what your costs are. Only you, as a farm producer, can make the appropriate decisions to sell your soybean production according to your costs and your expectations about future price opportunities.