Industry Insight

Understanding Almond Supply and Demand: Market Analysis

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Similar to other agricultural commodities, almond demand analysis is based on the consumption of supply. In 1953, Fox explained that "consumption usually depends upon current price. For many commodities, however, consumption for a marketing year is highly correlated with production which, in turn, is not significantly affected by price during the period of marketing" (p. 2)[1]. Interestingly enough, Fox's observations of agricultural products in the 1950s still hold true in 2025. When looking at the almond industry, crop sales are limited by the industry's annual production and carry-in (from the prior crop year)—thus identifying the industry's annual saleable crop supply. Furthermore, since almond trees produce for approximately 20 years, they are considered a "permanent crop". Therefore, the decision to grow almonds does not change from one year to the next, as in row crops (such as corn, soybeans, wheat, carrots, onions, or potatoes). As such, annual production for established almond orchards are independent of price fluctuations. However, most recent (or expected) productions and returns do affect the decisions to replant an orchard, change to another crop, or leave the orchard fallow when it is around 18 to 20 years old—the age when almond trees begin their production "decline".

Since almond production supplies are relatively stable, the variables that can affect almond prices are deviations from established crop estimates in the early months of the crop year, the expected monthly sales positions by the industry, and the expected shipment levels throughout the crop marketing year. This article explores each of these factors, provide historical benchmarks, and then examine the impact on almond prices when crop receipts, sales positions, and/or shipment levels deviate from historical baselines.

Historical Monthly Crop Receipts

The almond harvest (typically) starts between late July and early August—depending on various factors, such as: almond kernel maturity, the moisture levels of the almonds, and the late summer temperatures when almonds are dried in the orchards following a shake. When considering historical crop receipt percentage levels for the last 25 years, a pattern can be detected. Although the almond crop has more than tripled in size from 2000 to 2025, the crop receipt patterns of monthly receipts (as a percentage

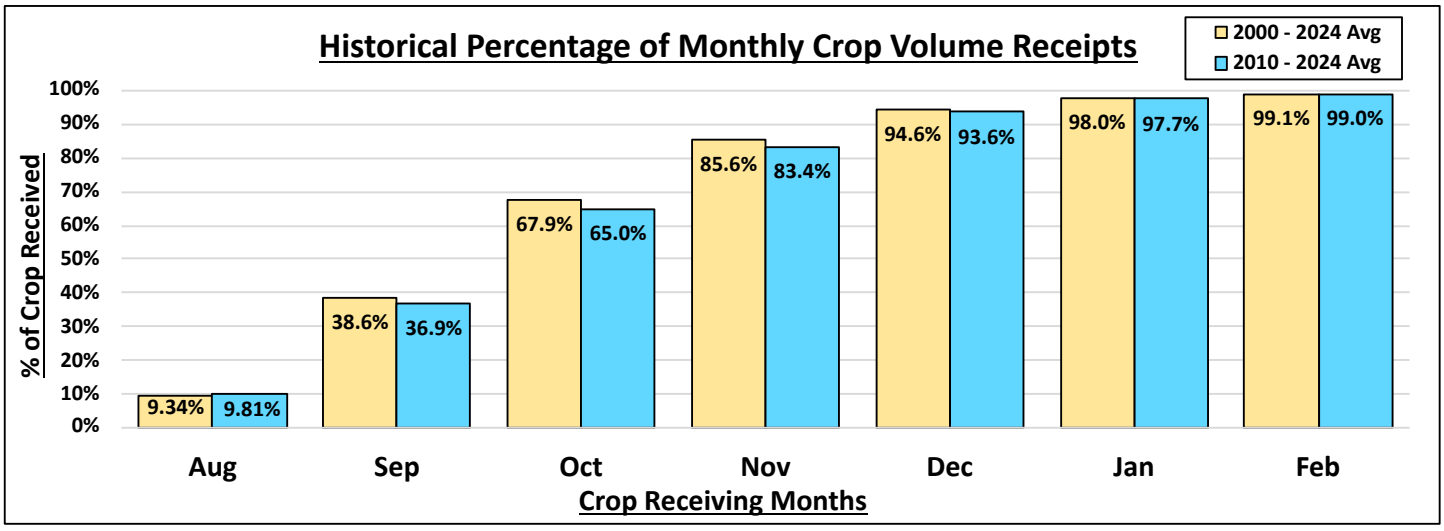


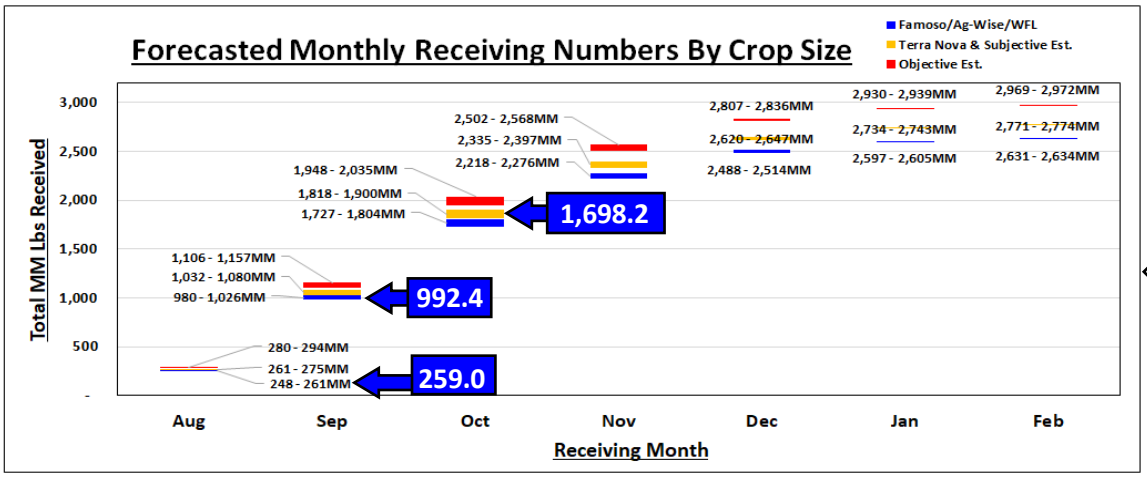
Figure 1 Historical Percentages

[1] Fox, Karl A. "The analysis of demand for farm products." (1953). USDA Technical Bulletin No. 1081. https://ageconsearch.umn.edu/record/156646/files/tb1081.pdf

of the total crop receipts for every crop year) has remained relatively constant—despite the increase in crop yields in the early 2010s (with the emergence of self-pollinating varieties and new farming techniques)—see Figure 1.

Understanding the predictability of the monthly historical crop receipt percentages is important because it allows farmers, processors, market stakeholders, and researchers to estimate the total crop size when the monthly position report is published by the Almond Board of California (ABC). Why is this significant? From May to July, there are several crop forecasts published. The most widely cited are the two crop forecasts are published by the USDA (the Subjective Estimate in May and the Objective Estimate in July) and those from private agencies (such as the Terra Nova estimate in April and the Famoso Nut, Ag-Wise, and Wonderful Estimate in May). For crop year 2025, the Terra Nova and USDA Subjective Estimate were both 2.80 billion lbs. The USDA Objective Estimate was the highest at 3.0 billion lbs; however, the Famoso Nut, Ag-Wise, and Wonderful Estimate was the lowest at 2.66 billion lbs. Using the known monthly historical receipt percentages, the crop receipts percentages can be matched to the annual crop forecasted volumes to estimate monthly receipt ranges for each forecast. As crop receipt volumes are reported in the ABC's monthly position reports, the forecasted monthly volumes can be matched to the "actual" monthly crop receipts to identify which forecast's expected monthly receipts most closely matches the actual monthly receipt volumes. As of November 13, the receipts for crop year 2025 are trending in a pattern closely matching the Famoso Nut, Ag-Wise, and Wonderful Estimate—see Figure 2.

Hist % of Crop Received by Month			FAMOSO/AG-WISE/WFL 2.66 Billion Forecast		TERRA NOVA / SUBJECTIVE 2.80 Billion Forecast		OBJECTIVE EST 3.0 Billion Range		Actual Receipts	Which fcst range do the receipts fall within?
Month	2000 - 2024	2010 - 2024	25-Yr Hist	15-Yr Hist	25-Yr Hist	15-Yr Hist	25-Yr Hist	15-Yr Hist		
Aug	9.34%	9.81%	248	261	261	275	280	294	259.0	FAM/AG/WFL
Sep	38.6%	36.9%	1,026	980	1,080	1,032	1,157	1,106	992.4	FAM/AG/WFL
Oct	67.8%	64.9%	1,804	1,727	1,900	1,818	2,035	1,948	1,698.2	FAM/AG/WFL
Nov	85.6%	83.4%	2,276	2,218	2,397	2,335	2,568	2,502		
Dec	94.5%	93.6%	2,514	2,488	2,647	2,620	2,836	2,807		
Jan	98.0%	97.7%	2,605	2,597	2,743	2,734	2,939	2,930		
Feb	99.1%	99.0%	2,634	2,631	2,774	2,771	2,972	2,969		



There are four (4) different forecasts published from April to July every year. After 3 months into the 2025 Crop Year, the monthly receipt pattern that most closely matches the actuals is the Famoso Nut/Ag-Wise/Wonderful forecast.

Figure 2 2025 Crop Forecast Volumes by Agency and Actual Crop Receipts (as of Nov 13, 2025)

Almond Shipments and Commitments

Before doing a deep-dive analysis of almond shipments and commitments, it is important to understand that demand for almonds is not measured in "actual" demand (i.e. anyone who wants to purchase almonds can buy them because there is an unlimited supply). Since almonds are a permanent agricultural crop, the supply is constrained by the annual production of the bearing acres in any given year. Therefore, almond demand is not "unconstrained" demand, but rather, it is a percentage sold of the total available supply (i.e. the carry-in from the previous crop plus the new crop for any given year).

Understanding almond demand as a percentage of consumption of total saleable supply is important; however, just like the expected monthly receipts, almond demand also has established percentage sold and percentage shipped benchmarks the industry uses to monitor and gauge almond demand. There are two measures reported by the ABC to identify current almond demand. The first measure is the total monthly commitments. In this case, commitments are almonds that are sold (i.e. contracted) but not yet shipped. The second measure is actual almond shipments (both domestic and export). The combination of commitments and shipments provides an industry estimate of total consumption of the existing crop's saleable supply. Industry stakeholders use the percentage committed and shipped to gauge demand—see Figure 3.

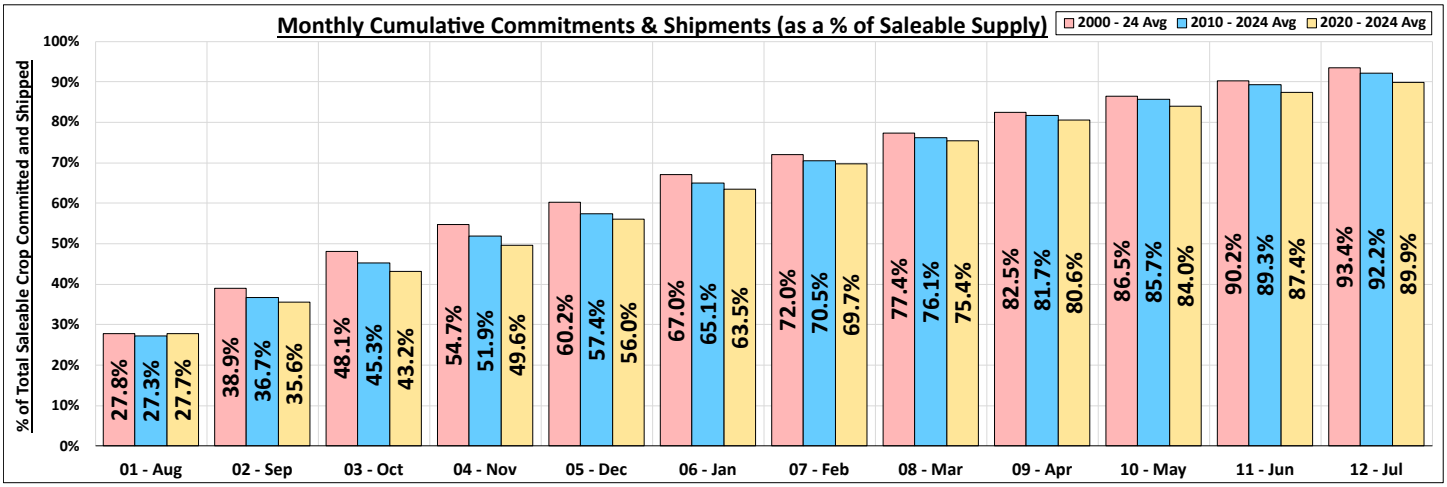


Figure 3 Monthly Cumulative Commitments and Shipments (as a % of Saleable Supply)

As Figure 3 shows, the historical monthly cumulative commitments and shipments (as a percentage of saleable supply) have remained relatively constant over the last 25 years; however, when looking at the last 15 years and the last 5 years, the data suggests a slight and gradual decline in monthly sales percentages as the industry has tripled in size since 2000 and matured as a commodity over that time.

Supply, Demand, and Pricing

The Fall 2024 edition of the Central Valley Journal of Agriculture and Food[2] estimated the elasticity for almonds to be approximately 0.646 (while also explaining how to use the calculation to forecast annual grower returns). This article explores how changes in available crop supply (either from new crop forecasts, incoming new crop receipts, and/or commitments and shipments) can be used to forecast almond spot market prices.

To demonstrate the technique, a walkthrough of three examples from the May 2025 to October 2025 is provided. The first example occurred when the USDA published the Subjective Estimate for the upcoming 2025 crop year (May 10, 2025). At the time, the most recent crop forecast (published by Famoso Nut, Ag-Wise, and Wonderful) estimated the 2025 crop at 2.66 billion lbs; however, the USDA's Subjective Estimate forecasted 2.80 billion lbs. Figure 4 provides a deconstruction of the forecasted price and the reported spot market price a day after the forecast was published.

Figure 4 shows the spot price of Standard 5 almonds on May 10th was $3.20/Lb. The model would have expected a price decrease to $3.13/Lb (since volume increased); however, Standard 5 prices remained unchanged—which suggests the market had already baked in a crop supply estimate of 2.80B Lbs into prices.

[2] Abran Padilla. "Almond Crops and 2024 Forecasted Volume." *Central Valley Journal of Agriculture and Food*, no. 2 (2024): 7-17. https://www.csub.edu/gfc/_files/CVJournalGRIMMVolume1Issue2.pdf

STEP 1: 2024 Saleable Supply (MM Lbs) -- May 10th	
Carry-In:	502.7
Net 2024 Crop	2,800.0
<LESS> 2024 Inedibles (2%)	*(56.0)*
Total 2024 Saleable Supply	**3,246.7**
<LESS> Est 2024 Shipments	*(2,700.0)*
Expected 2024 Carry-Out	**546.7**

STEP 2: 2025 Forecasted Saleable Supply (MM Lbs) -- May 10th	
2024 Crop -- Carry-In	546.7
USDA Subjective Estimate	2,800.0
<LESS> 2025 Inedibles (2%)	*(56.0)*
Total 2025 Saleable Supply	**3,290.7**

STEP 3: 2025 Forecasted Saleable Supply (MM Lbs) -- May 10th		
2024 Saleable Crop Supply	3,246.7	[A]
2025 Saleable Crop Supply	3,290.7	[B]
Volume Difference in Supply	**44.0**	[C] = [B]-[A]
% Change vs 2024 Supply	1.36%	[D] = [C]/[A]
Almond Elasticity	-0.646	[E]
Est Expected % Change in Price	***-2.1%***	[F] = [D]/[E]
Standard 5 Price in Prev Mkt Info	**$ 3.20**	[G]
Est Spot Mkt Price After Rpt	**$ 3.13**	[H] = [G]*(1+[F])
Actual Spot Mkt Price After Rpt	**$ 3.20**	

Figure 4 Standard 5 Spot Market Price Forecast and Actual Following the USDA Subjective Estimate

The next example of the relationship of available supply and prices occurred just a couple of months after the USDA's 2025 Subjective Estimate with the USDA's 2025 Objective Estimate[3]. In this case, the USDA published an Objective Crop Forecast of 3.0B Lbs. Prior to the USDA Objective Estimate, the market price for Standard 5s was $2.79/Lb. The increase in crop volume was approximately 10.31% over the 2024 saleable supply, so the elasticity model forecasted a price decline of 16.0% (from $2.79/Lb to $2.34/Lb). Within a week of the Objective Estimate's publication, the market price for Standard 5s decreased from $2.79/Lb to $2.35/Lb.

STEP 1: 2024 Saleable Supply (MM Lbs) -- July 10th	
Carry-In:	502.7
Net 2024 Crop	2,712.5
<LESS> 2024 Inedibles (2%)	*(54.2)*
Total 2024 Saleable Supply	**3,160.9**
<LESS> Est 2024 Shipments	*(2,625.0)*
Expected 2024 Carry-Out	**535.9**

STEP 2: 2025 Forecasted Saleable Supply (MM Lbs) -- July 10th	
2024 Crop -- Carry-In	546.7
USDA Subjective Estimate	3,000.0
<LESS> 2025 Inedibles (2%)	*(60.0)*
Total 2025 Saleable Supply	**3,486.7**

STEP 3: 2025 Forecasted Saleable Supply (MM Lbs) -- July 10th		
2024 Saleable Crop Supply	3,160.9	[A]
2025 Saleable Crop Supply	3,486.7	[B]
Volume Difference in Supply	**325.8**	[C] = [B]-[A]
% Change vs 2024 Supply	10.31%	[D] = [C]/[A]
Almond Elasticity	-0.646	[E]
Est Expected % Change in Price	***-16.0%***	[F] = [D]/[E]
Standard 5 Price in Prev Mkt Info	**$ 2.79**	[G]
Est Spot Mkt Price After Rpt	**$ 2.34**	[H] = [G]*(1+[F])
Actual Spot Mkt Price After Rpt	**$ 2.35**	

Figure 5 Spot Market Price Forecast and Actual Following the USDA Objective Estimate

The last example of the saleable supply and price dynamic comes after the publication of the ABC's September 2025 position report. The lower-than-expected crop receipt volumes suggest the 2025 crop is not 3.0 billion lbs[4], but rather, a number closer to the Famoso Nut/Ag-Wise/Wonderful's forecast of 2.66B Lbs, the market quickly adjusted its crop supply estimates once the crop began to arrive at huller/shellers in early August. In the ABC's September Position Report, the market price for Standard 5s was $2.80/Lb.

[3] To provide clarity on the difference between the "Subjective Estimate" and the "Objective Estimate", a simple explanation is warranted. The Subjective Estimate is based on survey responses from almond farmers (with regards to their crop growth progress, their perceived yield per acre, and the health of their crop). Conversely, the Objective Estimate is calculated from in-orchard sampling of almonds per tree, nut set, and kernel size.

[4] John Cox, "Relief may be in store for almond growers amid signs USDA may have overestimated 2025-26 crop size," Bakersfield.com, October 17, 2025. https://www.bakersfield.com/news/relief-may-be-in-store-for-almond-growers-amid-signs-usda-may-have-overestimated-2025/article_e5c5890d-3f39-4629-bf71-2a6f64f26e73.html

The incoming crop supply data was trending to suggest a 2.65 billion lb crop (see Figure 2 for trending details); however, the September Position Report also showed the August and September shipments were behind the 2024 shipment volumes in the first two months of the crop year. The net effect of these two changes in saleable supply suggested prices should be approximately $3.03 (suggesting prices would likely increase)—See Figure 6. A couple of weeks after the September Position Report was published (i.e. Halloween), Standard 5 prices had risen to $3.00—see Figure 7.

STEP 1: 2024 Saleable Supply (MM Lbs) -- July 10th	
Carry-In:	502.7
Net 2024 Crop	2,712.9
<LESS> 2024 Inedibles (2%)	*(54.3)*
<LESS> '24 Added Inedibles	*(31.1)*
Total 2024 Saleable Supply	**3,130.3**
<LESS> Est 2024 Shipments	*(2,646.5)*
Expected 2024 Carry-Out	**483.8**

STEP 2: 2025 Forecasted Saleable Supply (MM Lbs) -- July 10th	
2024 Crop -- Carry-In	483.8
USDA Subjective Estimate	2,650.0
<LESS> 2025 Inedibles (2%)	*(53.0)*
Total 2025 Saleable Supply	**3,080.8**
Aug & Sept 2025 Shipments	355.1
Aug & Sept 2024 Shipments	381.8
2025 vs 2024 Difference	**(26.8)**
Expected 2025 Shipments	**2,650.0**
% Shipment Difference for Aug/Sept vs Annual Forecasted Volume	**-1.01%**

STEP 3: 2025 Forecasted Saleable Supply (MM Lbs) -- July 10th		
2024 Saleable Crop Supply	3,130.3	[A]
2025 Saleable Crop Supply	3,080.8	[B]
Volume Difference in Supply	**(49.5)**	[C] = [B]-[A]
% Change vs 2024 Supply	-1.58%	[D_1] = [C]/[A]
% Sept '25 Demand Off vs Sept '24	**-1.01%**	[D2]
Net Change in Saleable Supply	-0.57%	[D3]
Almond Elasticity	-0.646	[E]
Est Expected % Change in Price	***0.9%***	[F] = [D]/[E]
Standard 5 Price in Prev Mkt Info	**$ 3.00**	[G]
Est Spot Mkt Price After Rpt	**$ 3.03**	[H] = [G]*(1+[F])
Actual Spot Mkt Price After Rpt	**$ 2.80**	

Figure 6 Standard 5 Spot Market Price Forecast and Actual Following the September 2025 ABC Position Report

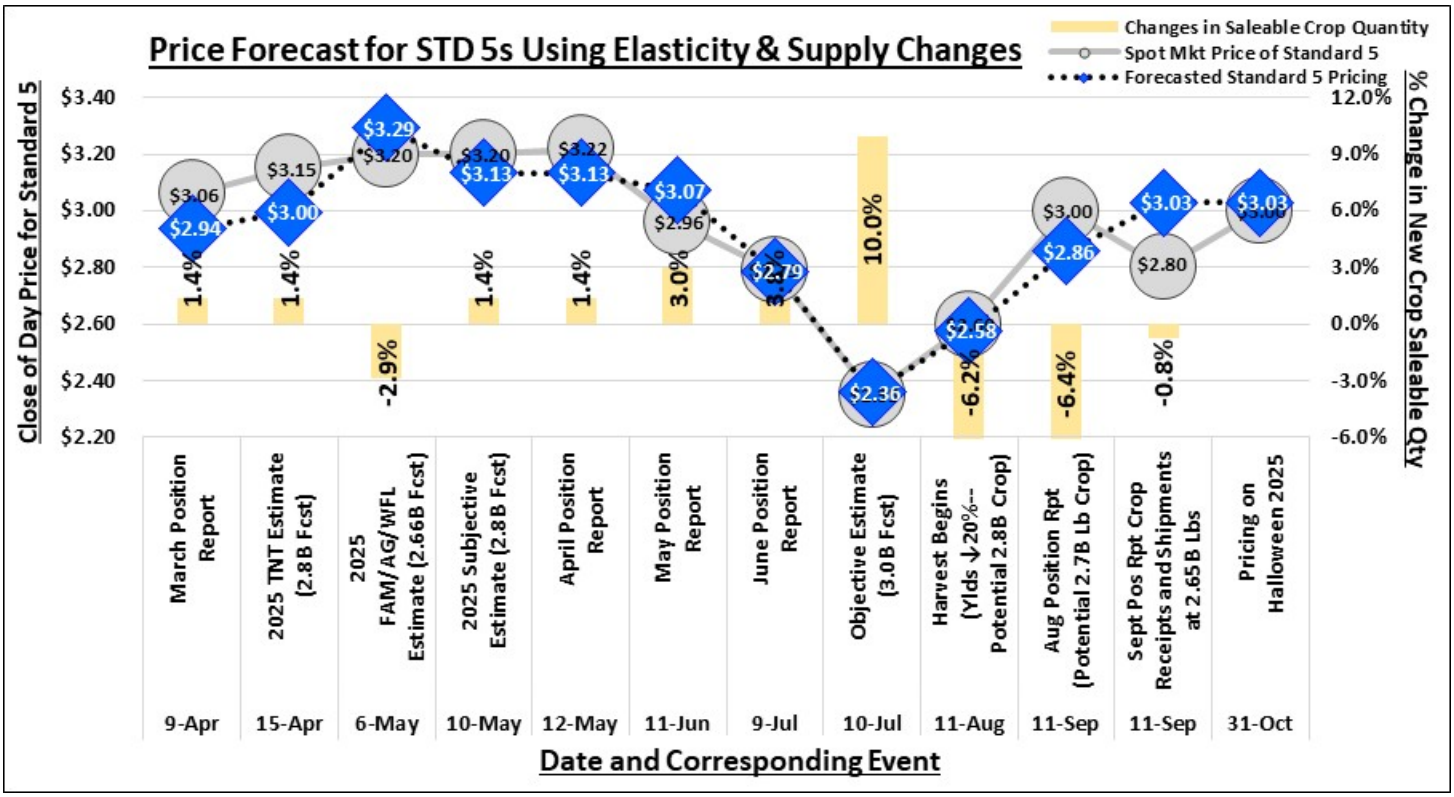


Figure 7 Price Forecast for STD 5s Using Elasticity and Supply Changes

Conclusion

The examples provided in this article could be interpreted as suggesting that almond price forecasting is very mechanical. In reality, this belief could be nothing further from the truth! Emotions by market participants, changes in domestic and international political and economic policies, and intra-

industry grower and processor needs all play a role in determining market prices; however, the market always reverts to fundamentals and (as shown in Figure 7) almond pricing will behave rationally over the long-term. That said, price fluctuations reacting to market dynamics are to be expected on a daily, weekly, and monthly basis. The purpose of present the pricing model and methodologies is to provide a theoretical framework market analysts and participants can use to forecast potential near and long-term almond spot market price movements.