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Southern Agricultural Economics Association

<https://www.saea.org/>

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Oklahoma City, Oklahoma**

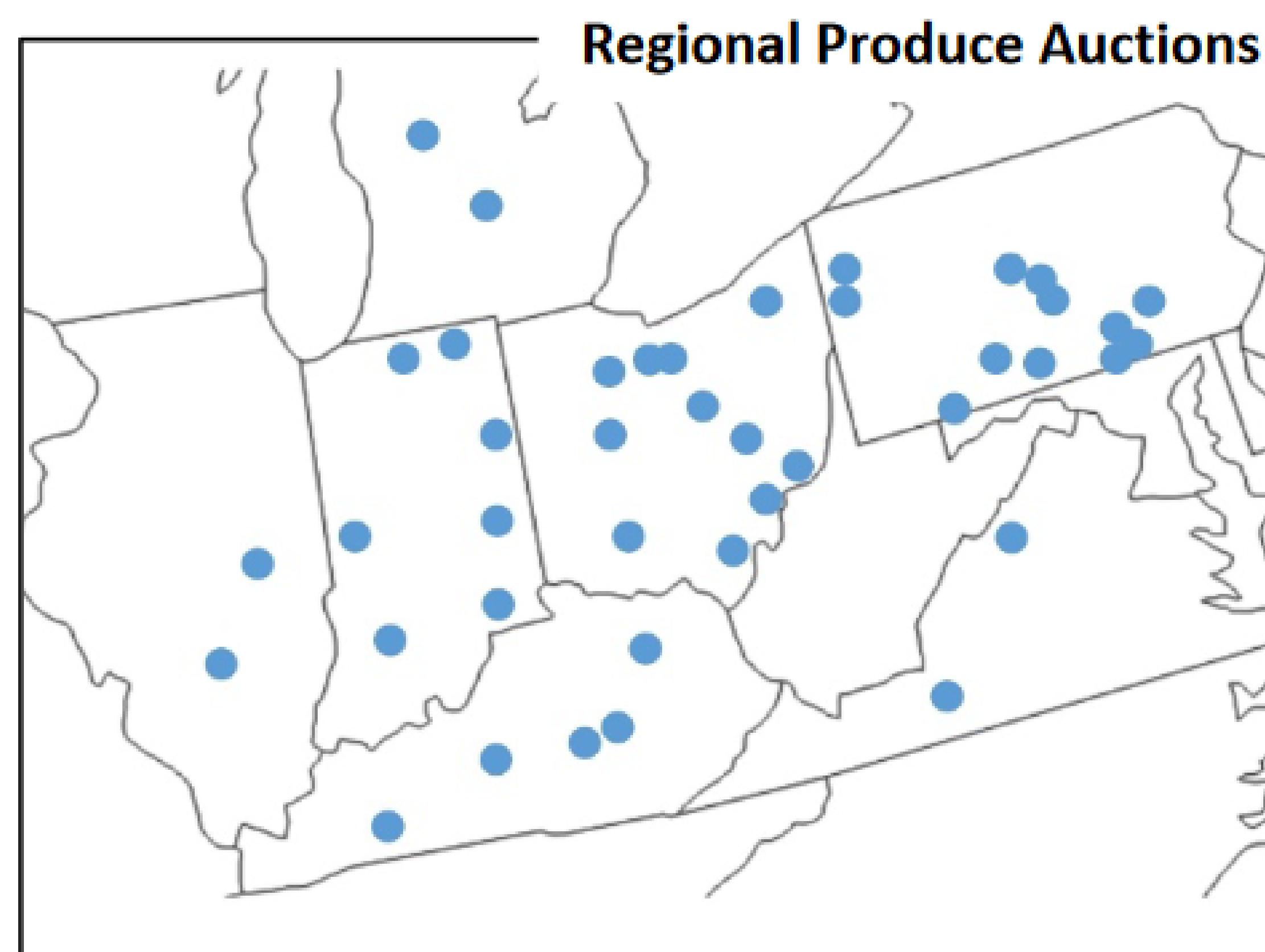
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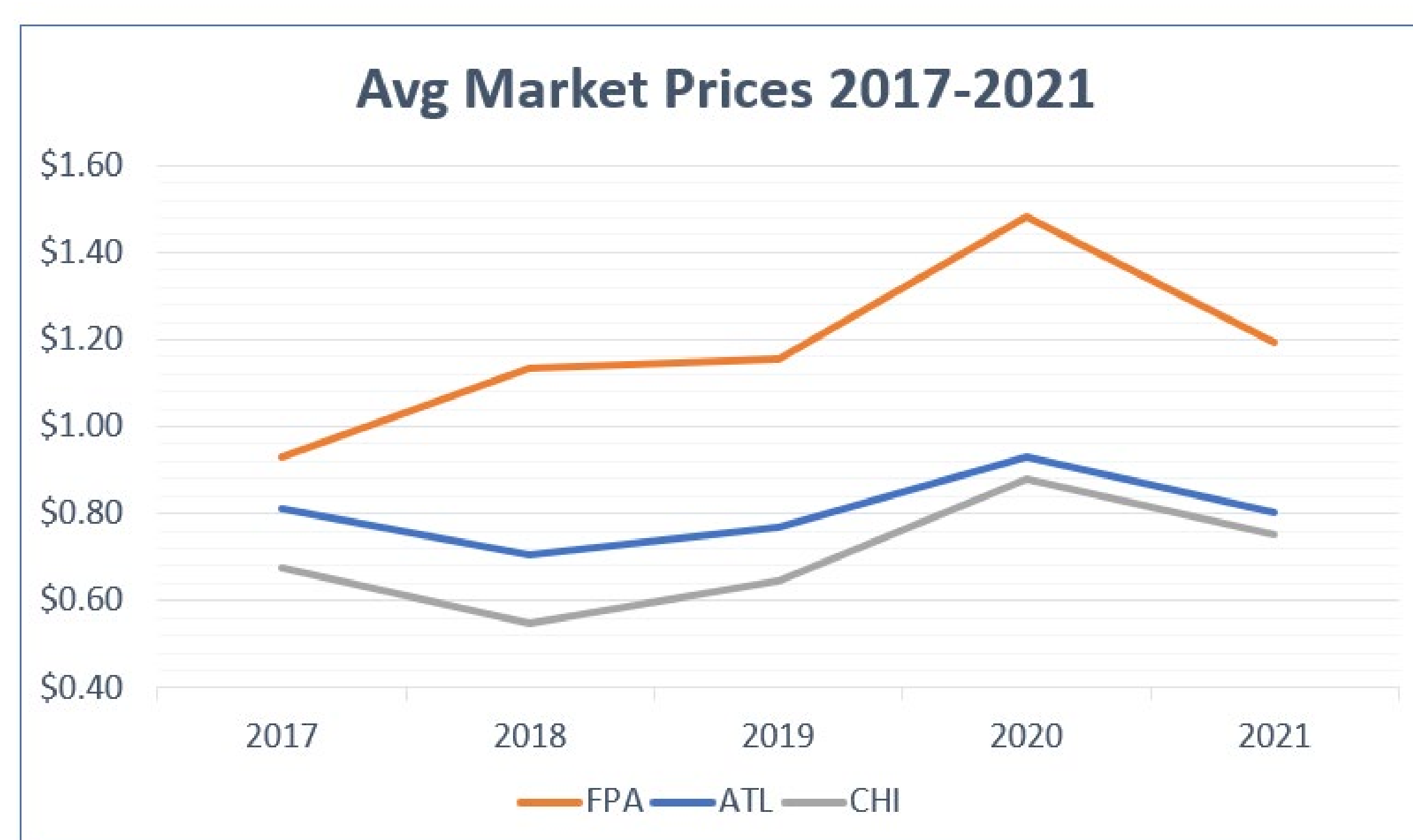
Background

- Produce Auctions give small, diversified producers a market channel for fresh produce
- The price response of auctions to Terminal Markets has not been studied to a large extent
- This analysis utilizes data on **US #1 tomatoes** from the Fairview Produce Auction (FPA) in Christian County, KY
- The data from FPA is compared to corresponding data from Atlanta (ATL) and Chicago (CHI) Terminal Markets

Produce Auctions in Kentucky and Surrounding Areas

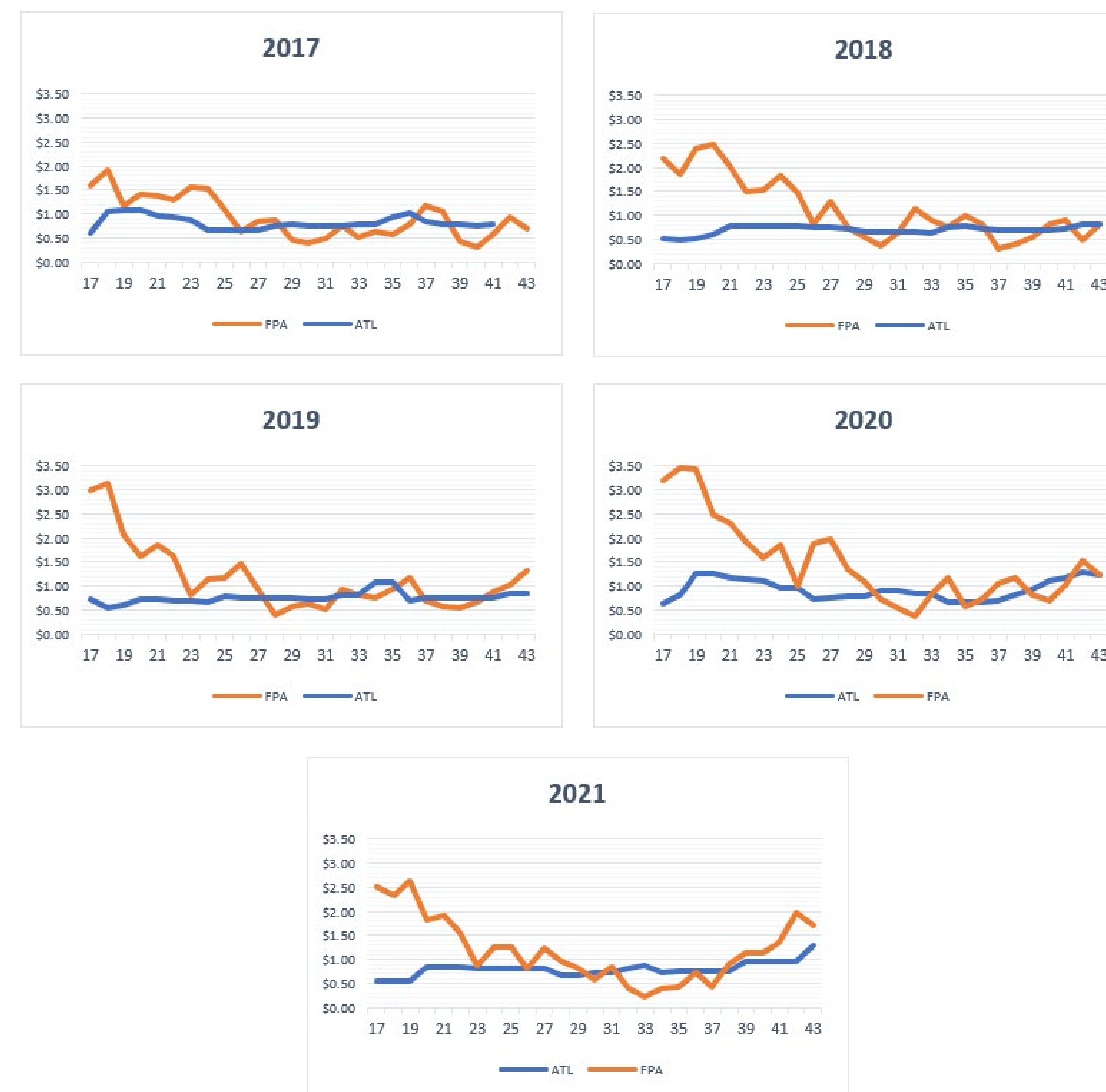


Avg market prices for US #1 Tomatoes at ATL & CHI Terminal Markets & Fairview Produce Auction



Price Trends

2017-2021 Produce Auction (FPA) and Atlanta Terminal Market (ATL) Prices



Data

- Usable data from Fairview Produce Auction (FPA) included weeks 17-43 of each year from 2017-2021
- Weeks and years were created as dummy variables, Week 29 was chosen as the reference week as it had the highest average quantity sold at FPA across 2017-2021
- 2019 was chosen as the reference year because it displayed the average price across years and had no abnormal market events

Observations

- On average, a \$1 price increase at the Atlanta Terminal Market would lead to a \$0.49 increase in price at Fairview Produce Auction
- There is a slight negative relationship between quantity and price at auction, as expected
- 2020 showed higher prices across the board for #1 Tomatoes

Analysis

- **Weeks:** Showed expected trend of high price response early in the season when quantities are restricted, lessens throughout season with some variation
- **Years:** 2021 closest to being what producers expect at Produce Auction- traditional "U" shape. Other years not consistent with this hypothesis, further research is needed
- **Markets:** Chicago data likely not significant because of inconsistencies in data, further data collection is needed

Linear Regression (Price at FPA)

Observations 1,083
R-Squared 0.758

Variable	Coefficient	P>t
QtyFPA	-0.0000189	0.000***
PriceATL	0.4895184	0.000***
PriceCHI	0.0257677	0.801
Year2017	-0.3844234	0.000***
Year2018	-0.0552004	0.129
Year2020	0.062511	0.051*
Year2021	-0.2382275	0.000***
Week17	1.511277	0.000***
Week18	1.566319	0.000***
Week19	1.444924	0.000***
Week20	0.880644	0.000***
Week21	0.8009185	0.000***
Week22	0.4660413	0.000***
Week23	0.1270206	0.104
Week25	0.1399486	0.177
Week24	0.3953555	0.000***
Week26	0.484417	0.000***
Week27	0.5829043	0.000***
Week28	0.0880733	0.254
Week30	-0.221417	0.001***
Week31	-0.273603	0.000***
Week32	-0.2061601	0.015**
Week33	-0.2278669	0.002***
Week34	-0.1467112	0.054*
Week35	-0.3070947	0.000***
Week36	-0.1983694	0.022
Week37	-0.2692401	0.001***
Week38	-0.2651519	0.001***
Week39	-0.5056973	0.000***
Week40	-0.5842453	0.000***
Week41	-0.3136973	0.000***
Week42	-0.0991918	0.32
Week43	-0.1779487	0.091
Constant	0.8874146	0.000***

Note: Significance Levels: * 10%, ** 5%, *** 1%