HASS AVOCADO BOARD

Rethinking Retail: Avocado Seasonality Drivers

Understanding the impact of Avocado Shipments, Retail Sales and Shopper Purchase Behaviors on Seasonality to Drive Retail Sales of Hass Avocados

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Executive Summary

Avocados are available for purchase across the U.S. year-round, yet seasonal influences impact the supply chain and retail marketplace. In-turn, these influences and changing shopping behaviors, have driven an evolution of seasonality in the avocado category over the past four years.

Summer has traditionally been considered the peak for retail avocado sales. However, since 2018, Quarter 1 has seen great strides in retail sales growth and now marks the peak of retail avocado volume. This change has been partially driven by an increase in household penetration and purchase frequency:

- Quarter 1 HH penetration increased +2 points since 2018, reaching 44% in 2021
- The number of Quarter 1 purchase trips increased +14% since 2018, reaching nearly five trips per household in 2021

The increase in HH penetration and purchase frequency were largely driven by greater numbers of Moderate shoppers. However, Moderates began to bow out of the category in Q2, when prices increase, and retail dollar sales peak. Higher prices did not turn away the most impactful shopper group, however. Ultra shoppers were the driving force behind greater dollar sales in Q2 and Q3. Summertime saw an increase in the number of Ultra shoppers and their frequency of purchase:

- In 2021, Quarter 2 saw an increase of around 300 thousand Ultra households over Q1 and their household purchase trips for avocados increased from 9.5 trips in Q1 to 9.9 trips in Q2.

These purchase trends highlight the importance of early to mid-year category dynamics. However, Q4 may present a significant opportunity to expand sales of Hass avocados. Today, Q4 represents the lowest engagement for avocado shoppers, as purchase trips hit their lowest point at 179 million. However, retail traffic in the grocery industry hits it's peak in Q4 with nearly 10 billion trips made to retailers that carry avocados. Taking advantage of higher retail traffic during Q4 can be a key factor in driving the next surge of growth in the avocado category. See the key opportunities page for more information on the importance of these market dynamics and their impact on avocado seasonality.

Key Opportunities

Key Opportunity

Maintain momentum of Quarter 1 category growth by creating points of engagement with avocado shoppers

Quarter one provides an opportunity to engage with the greatest number of avocado shoppers. Household penetration and purchase frequency peak in Q1, while growing shipment volume during Q1 provides the support to capitalize on increased retail demand. Creating promotions and other opportunities to engage these shoppers can help maintain the momentum of Q1 growth and maximize retail sales of Hass avocados.

Key Opportunity

Focus on Ultra shoppers during Quarter 2 when they reach peak engagement

Quarter 2 brings more Ultra shoppers into the category with higher purchase frequency. These shopper behaviors drove greater retail dollar sales during Quarter 2, when average selling prices were highest. Quarter 2 offers more opportunities to connect specifically with Ultra shoppers as they reach peak engagement.

Key Opportunity

Take advantage of higher retail traffic during Quarter 4

In the grocery industry, Q4 represents the busiest time of year with nearly 10 billion trips made to retailers that carry avocados. In contrast, shopper trips to purchase avocados hit their lowest point during Q4 at 179 million. That is a purchase conversion rate of 1.9%. If Q4 were to match the purchase rate of Q1 (2.5%), the category would see incremental sales of over $316 million annually.

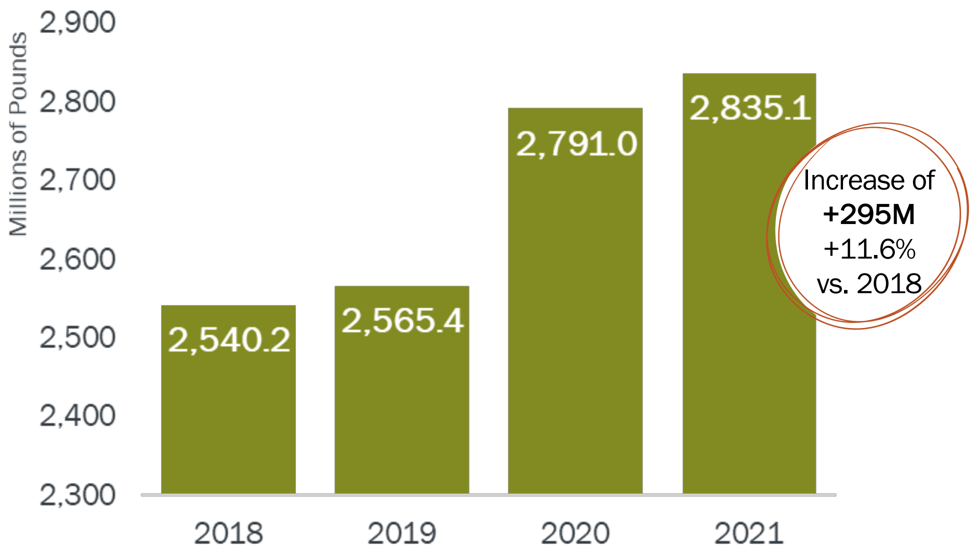
Avocado Supply Shipments Snapshot

Supply Shipment Trends

Supply Shipment Volume (Pounds) 2021 vs. 2018

Total shipments reached 2.8 billion lbs. in 2021, resulting in incremental shipments of +295M since 2018

Shipment volume increased +11.6% vs. 2018



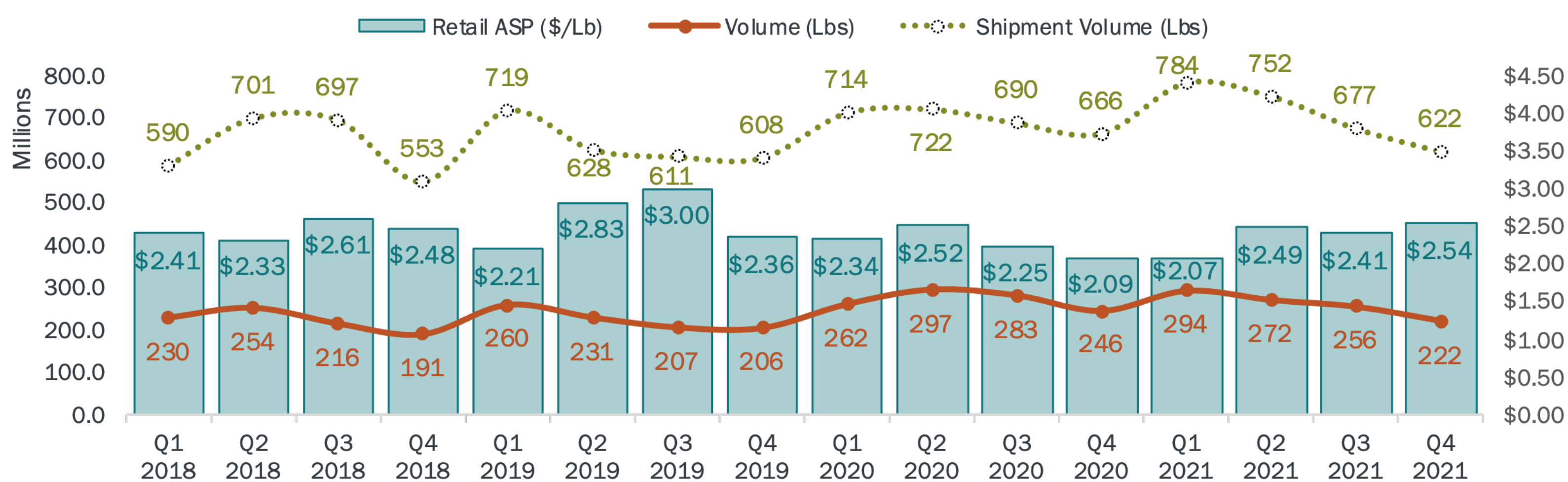
Data source: HAB Arrivals Data

Retail and Shipment Volume 2018 – 2021 by Quarter

Over the past four years, retail volume has followed the shipment volume trend, peaking during Q1 or Q2

Shipment and retail volume hit the lowest point in Q4 during each year

Retail ASP peaked in Q3 in 2018 and 2019, but peaked in Q2 in 2020 and 2021



Data source: Shipment Volume - HAB Arrivals Data
Retail Sales - IRI

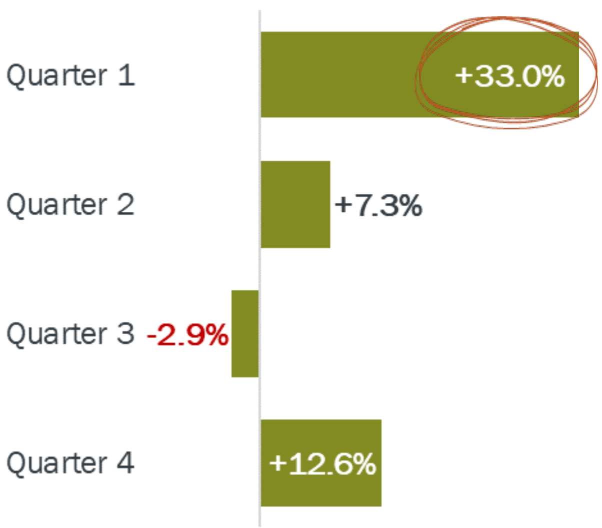
Shipment Volume Growth by Quarter 2021 vs. 2018

Quarter 1 saw the largest increase in shipments vs. 2018 at +33.0%

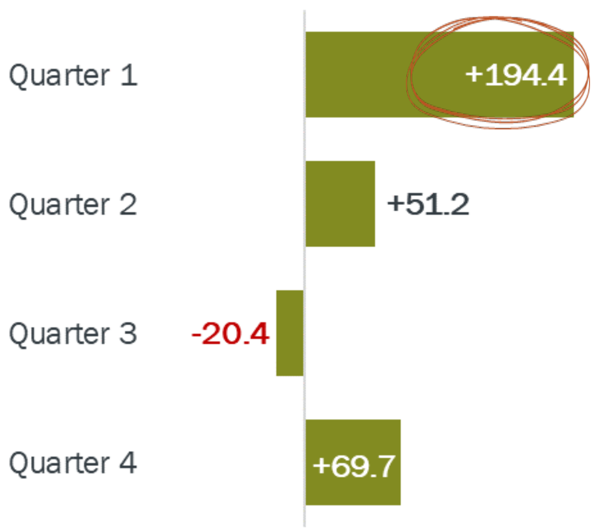
Quarter 4 saw the second highest increase at +12.6%

Avocado shipments declined -2.9% during Q3

% Growth



Volume (lbs.) Growth
(millions)

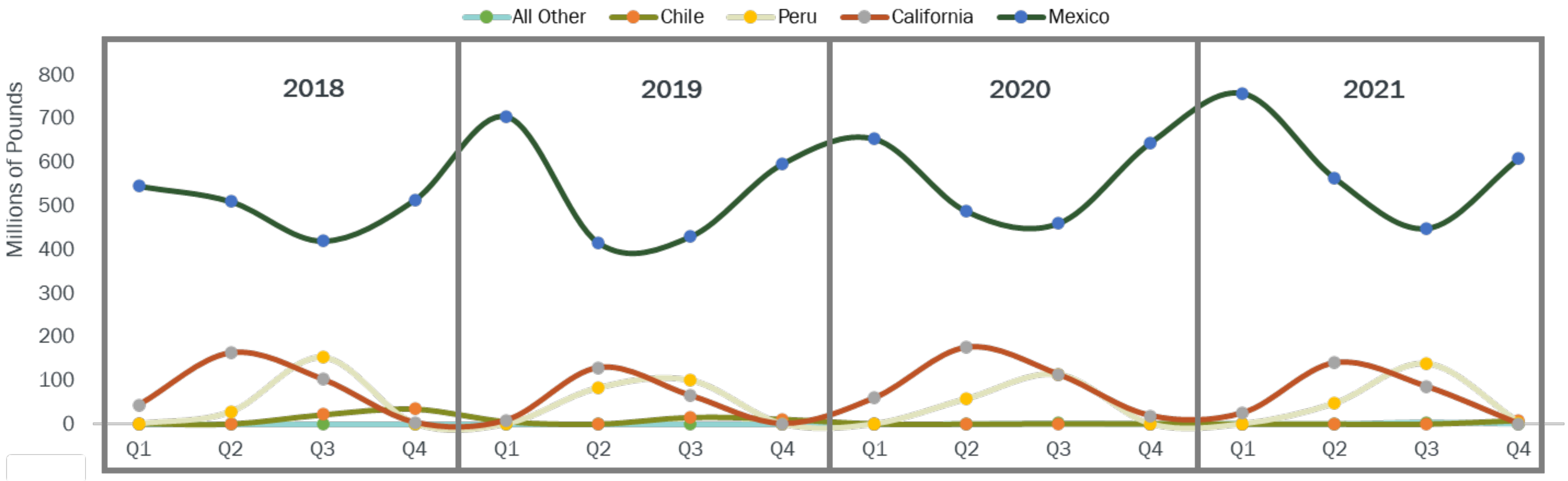


Data source: HAB Arrivals Data

Shipment Volume by Country of Origin 2018 - 2021

Peak shipment volume varied by County of Origin based on supply. Over the past four years:

Mexico volume peaked in Q1.
California volume peaked in Q2.
Peru volume peaked in Q3.

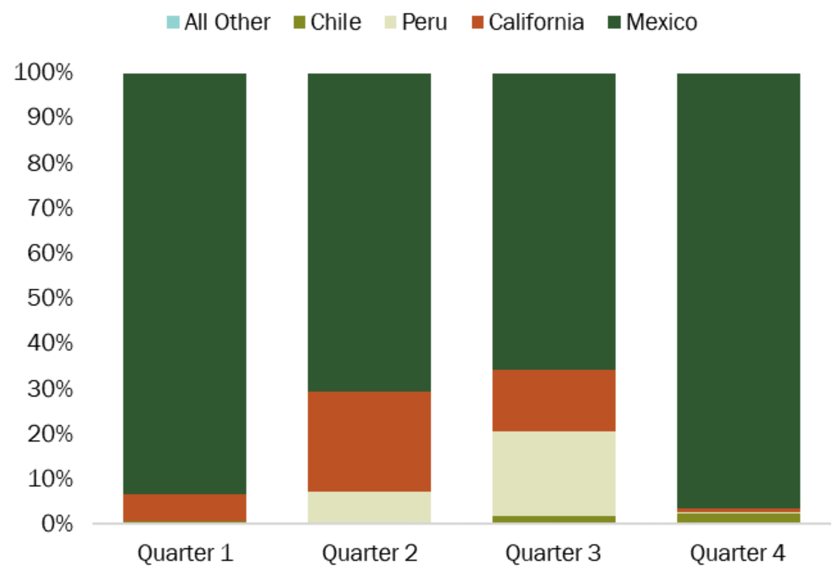


Data source: HAB Arrivals Data

Average Shipment Volume Share 2018 - 2021

Mexico holds over 90% of category shipment volume during Q1 and Q4

Mexico's share of shipments fell below 70% in Q3



Quarterly Shipment Volume 4-year Avg.	690.5 Million Pounds	700.7 Million Pounds	668.4 Million Pounds	612.1 Million Pounds

Data source: HAB Arrivals Data

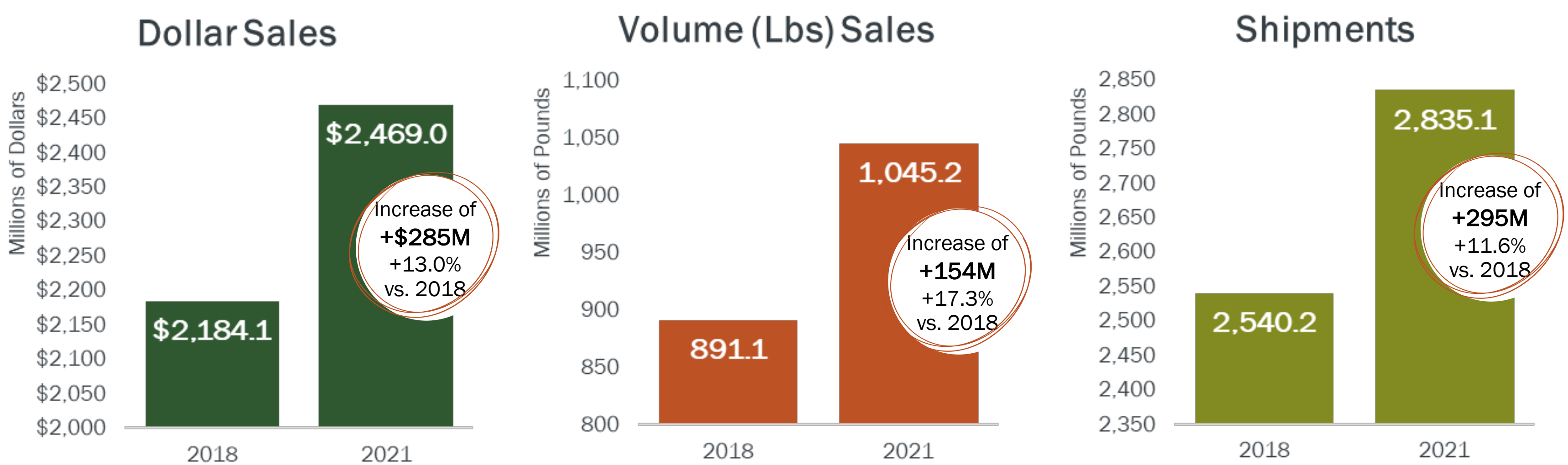
Avocado Category Retail Snapshot

Total Category Sales and Purchase Trends

Total Category Retail Sales and Shipments 2021 vs. 2018

Shipments have grown by +295 lbs. Retail dollars were up +$285M, while retail volume increased +154M lbs. over the 4-year period

Retail avocado volume reached 1.05 billion pounds in 2021 and accounted for 37% of the 2.8 billion in avocado shipment volume



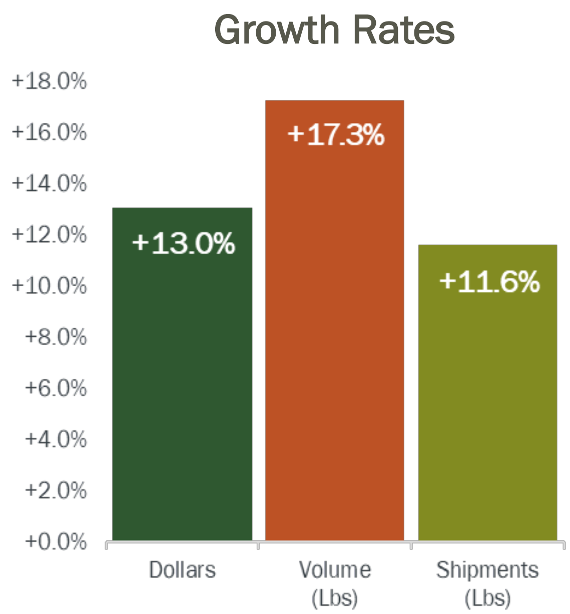
Retail Category Snapshot

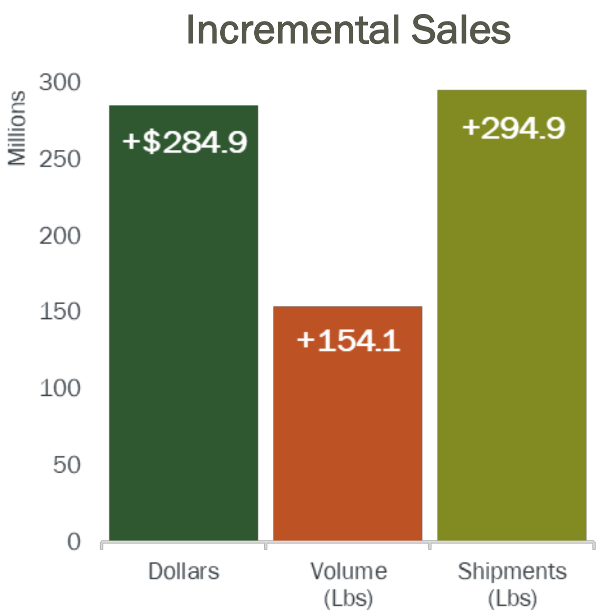
Data source: Shipment Volume = HAB Arrivals Data
Retail Sales = IRI

Category Growth and Incremental Sales 2021 vs. 2018

Retail volume increased +17.3% vs. 2018, outpacing shipment growth by +5.7 points

Retail dollars increased +13% vs. 2018



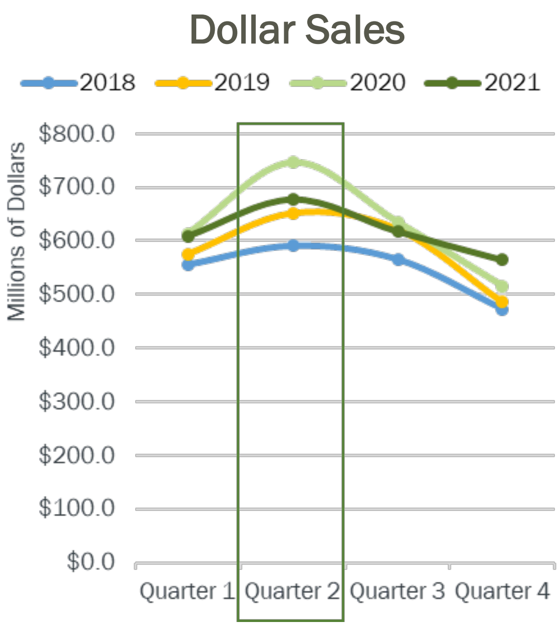


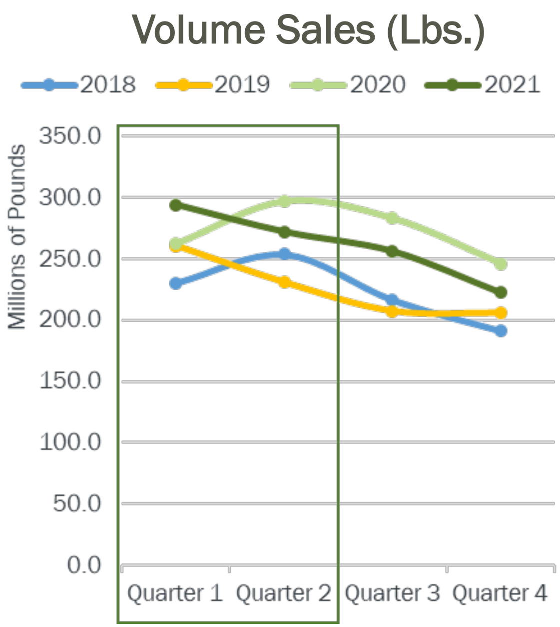
Data source: Shipment Volume = HAB Arrivals Data
Retail Sales = IRI

Retail Sales by Quarter 2018 - 2021

Retail dollars were highest in Quarter 2, while volume peaks varied between Quarter 1 and Quarter 2

Quarter 4 showed the lowest sales during each year



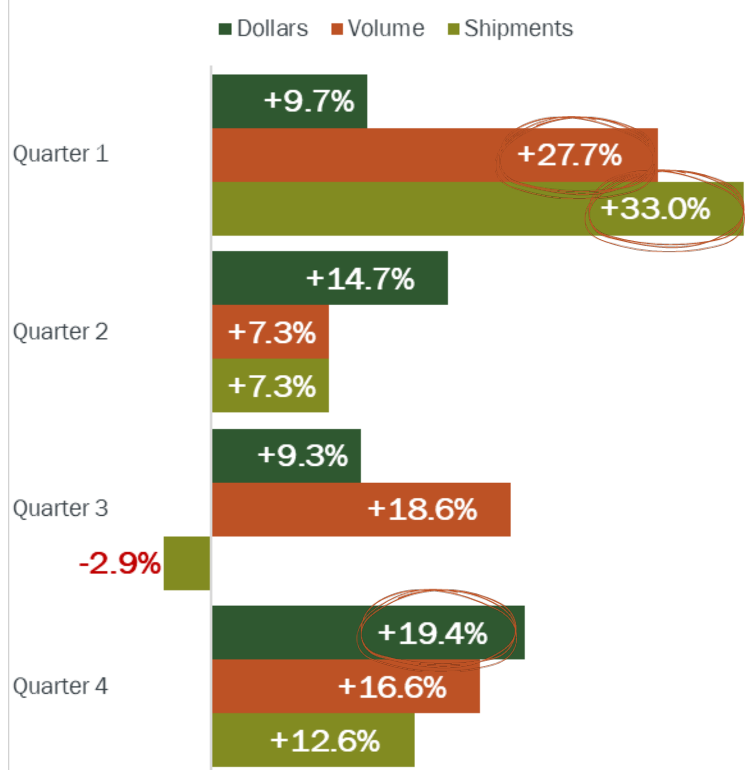


Data source: IRI Retail Sales

Retail Sales and Shipments - Growth by Quarter 2021 vs. 2018

Shipments and retail volume saw the highest growth rates during Quarter 1, while retail dollars saw the largest gains during Quarter 4

Since 2018, Quarter 3 shipments have shown declines, while retail dollars and volume posted strong growth for the Quarter



Data source: Shipment Volume = HAB Arrivals Data
Retail Sales = IRI

Average Selling Price: ASP* (Price/Lb.) 2018 - 2021

ASP peaked in 2019 and hit the lowest point in 2020 during the pandemic

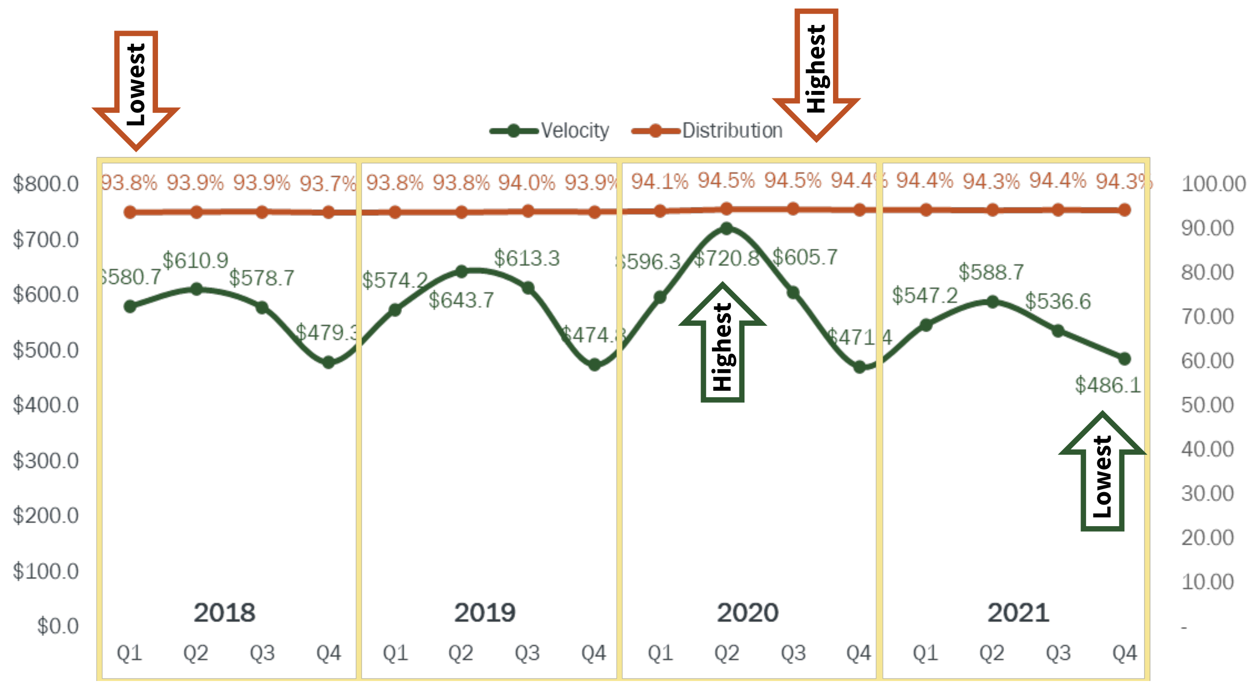
By Quarter, ASP peaked during Quarter 2 and 3, and was lowest during Quarter 1 over the 4-year period

Data source: IRI Retail Sales
*Average Selling Price Calculation = Dollar sales/Pounds

Dollar Velocity and Distribution* 2018 - 2021

The seasonality of avocado retail sales was driven by sales velocity. Distribution has remained steady over the past 4 years at ~94%

Sales velocity trends show annual peaks during Quarter 2, reaching its highest point during the pandemic of 2020 and the lowest point in 2021



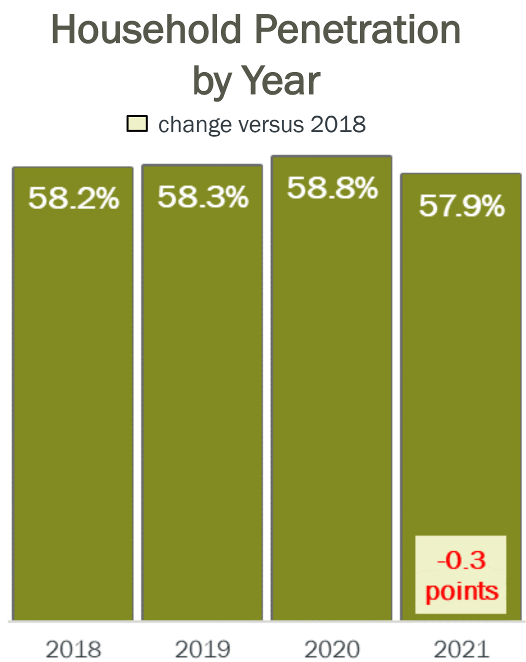
Data source: IRI Retail Sales
*Refer to terms and definitions (Slide 36) for information on sales measures

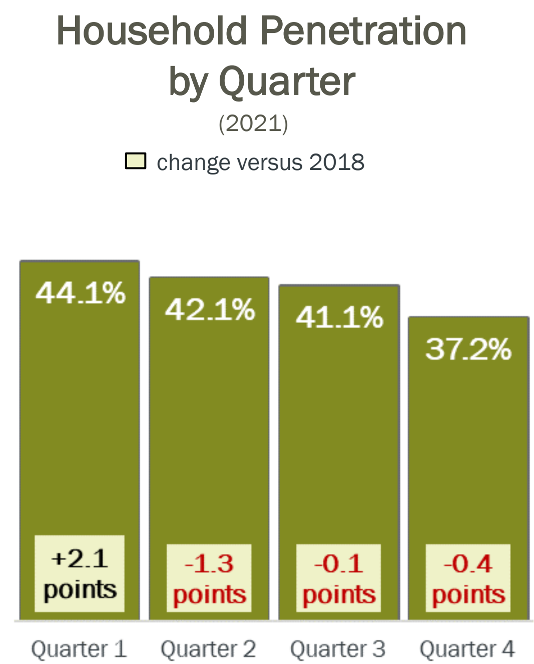
Avocado Household Penetration (Annually and by Quarter) 2018 - 2021

Household penetration since 2018 has held steady around 58%

Penetration begins each year at it's peak and slowly falls throughout the year. Quarter 1 averaged 44.1%, while Quarter 4 averaged 37.2%

Quarter 1 also saw an increase of +2.1 penetration points vs. 2018



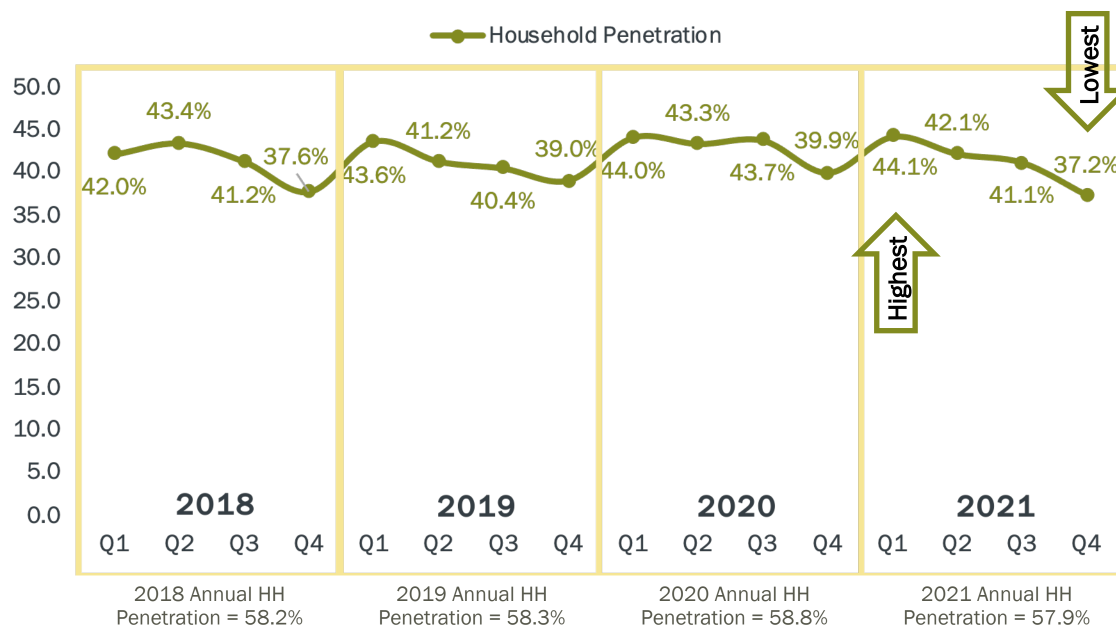


Data source: IRI Consumer Network™

Avocado Household Penetration by Quarter 2018 - 2021

Household penetration has fluctuated each Quarter over the past 4 years, with penetration peaking in Quarter 1 since 2019

During 2021, household penetration hit a 4-year high in Quarter 1, while falling to its lowest point in Quarter 4 in the same year



Annual HH Penetration is higher than any individual quarter. Most avocado shoppers do not purchase avocados during each quarter.

Data source: IRI Consumer Network™

Annual Avocado Spend per Household 2018 – 2021 by Quarter

Annual spend per household peaked in Quarter 2 at $19.47 per household

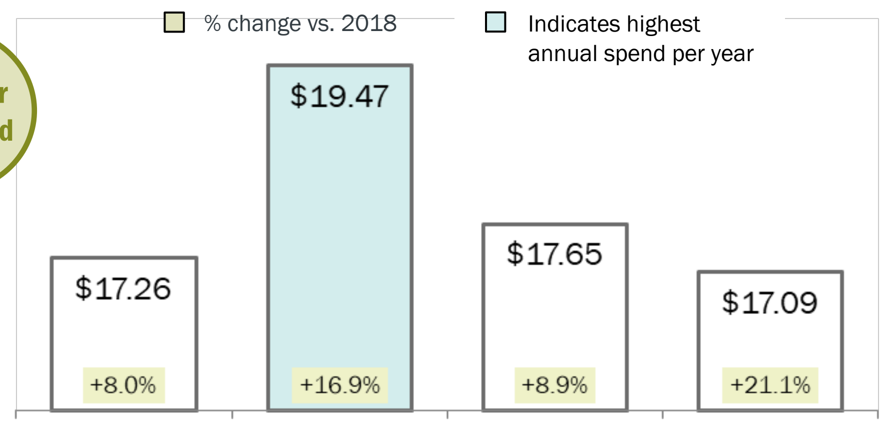
In 2021, annual spend per household increased during each Quarter when compared to 2018

Quarter 4 saw the greatest increase in spend per household at +21.1% vs. 2018

Annual Spend per Household by Quarter

2021

2021 Spend per Household $39.63



	Annual Average	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2020	**$39.64**	$16.75	$20.65	$17.55	$14.85
2019	**$36.55**	$16.09	$18.82	$18.09	$14.40
2018	**$34.26**	$15.98	$16.65	$16.21	$14.12

Retail Category Snapshot

Data source: IRI Consumer Network™

Annual Avocado Spend Per Trip 2018 – 2021 by Quarter

In 2021, avocado spend per trip peaked during Quarter 4

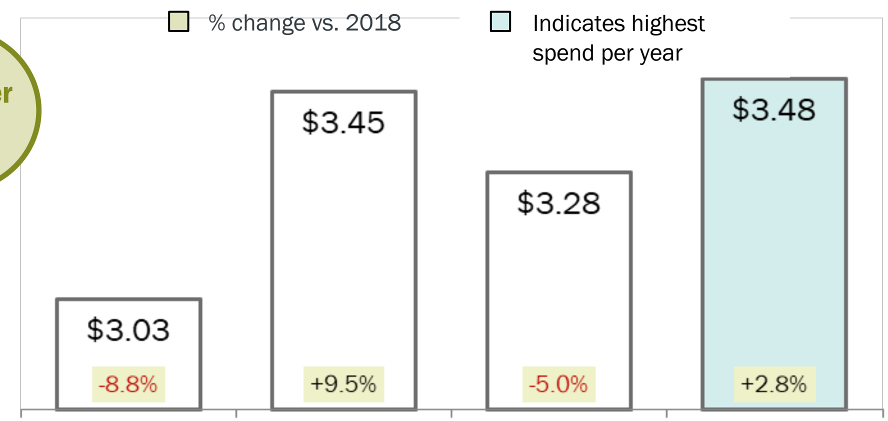
However, spend per trip peaked in Quarter 2 in 2019 and 2020

Spend per trip increased in Quarter 2 (+9.5%) and Quarter 4 (+2.8%), but declined in Quarter 1 (-8.8%) and Quarter 3 (-5.0%)

Annual Spend per Trip by Quarter

2021

2021 Spend per Trip $3.01



	Annual Average	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2020	**$2.86**	$2.98	$3.44	$3.14	$3.00
2019	**$2.93**	$3.05	$3.57	$3.50	$3.00
2018	**$2.86**	$3.32	$3.15	$3.46	$3.38

Data source: IRI Consumer Network™

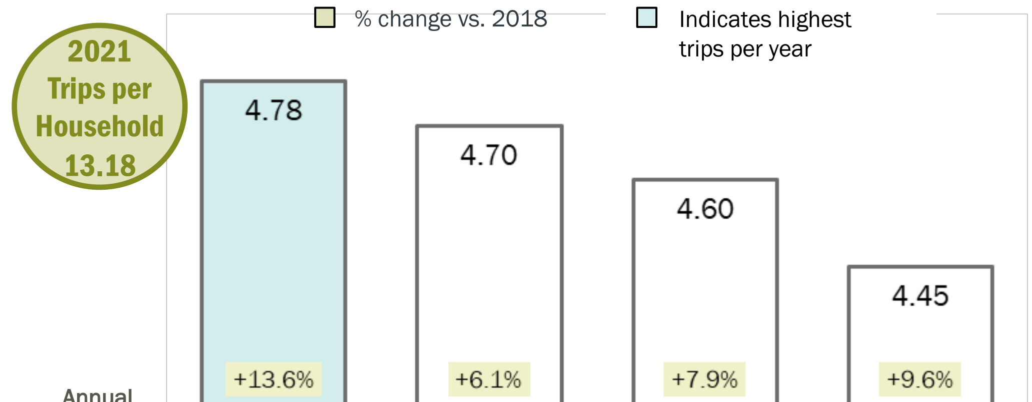
Annual Avocado Trips per Household 2018 – 2021 by Quarter

Annual avocado trips per household peaked in Quarter 1 during 2021, and increased +14% vs. 2018

Each Quarter in 2021 saw increases in trips per household over the 4-year period

Annual Trips per Household by Quarter

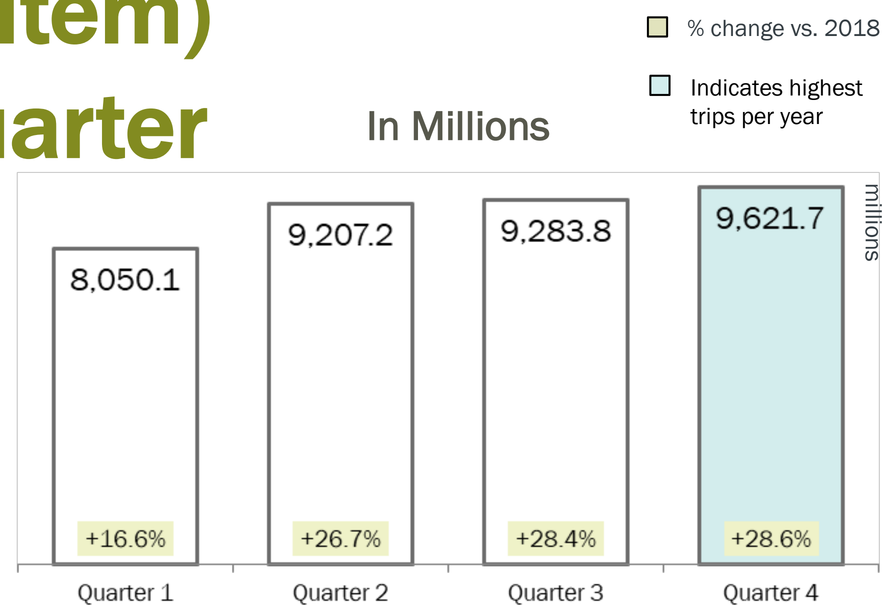
2021



	Annual Average	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2020	**13.88**	4.86	5.01	4.76	4.49
2019	**12.47**	4.50	4.41	4.45	4.30
2018	**12.00**	4.21	4.43	4.27	4.06

Data source: IRI Consumer Network™

Total Retailer Trips for Avocado Shoppers (For ANY Item) 2018 – 2021 by Quarter



Avocado shoppers made 9.6 billion shopping trips to retailers in Quarter 4 2021, the highest number of retail trips recorded in this study. Quarter 4 also saw the greatest increase in retail trips vs. 2018 (+28.6%)

In 2020, total retail trips peaked in Quarter 1, during the beginning of the pandemic. Retailer trips fell off each Quarter through the end of the year

2020	9,149.4	8,834.0	8,537.4	8,436.2
2019	7,271.5	8,587.5	9,250.4	8,681.8
2018	6,905.6	7,268.3	7,228.8	7,481.8

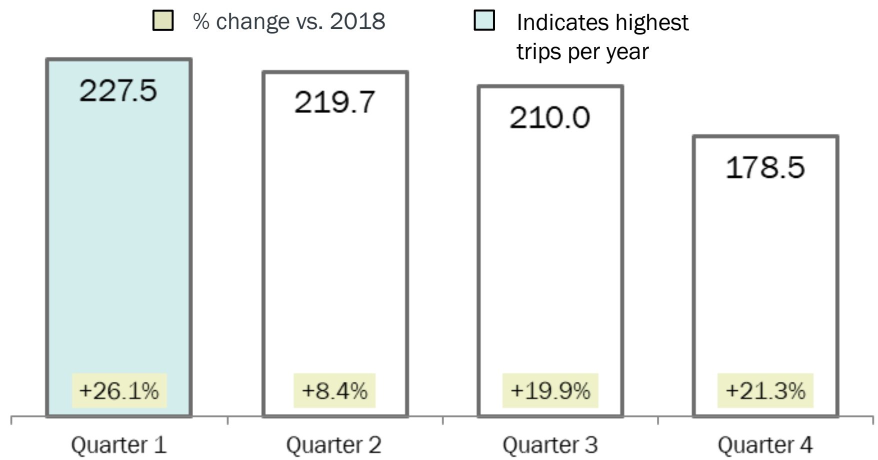
Data source: IRI Consumer Network[TM]

Total Avocado Purchase Trips 2018 – 2021 by Quarter

While avocado shopper retail trips peaked in Quarter 4 (Slide 23), actual avocado purchase trips hit their lowest point at 179 million

Avocado purchase trips peak in Quarter 1 at 228 million, which is when total retail trips are at their lowest point (Slide 23)

In Millions



	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2020	226.5	238.8	226.4	189.0
2019	205.2	195.5	194.1	175.3
2018	180.5	202.7	175.1	147.1

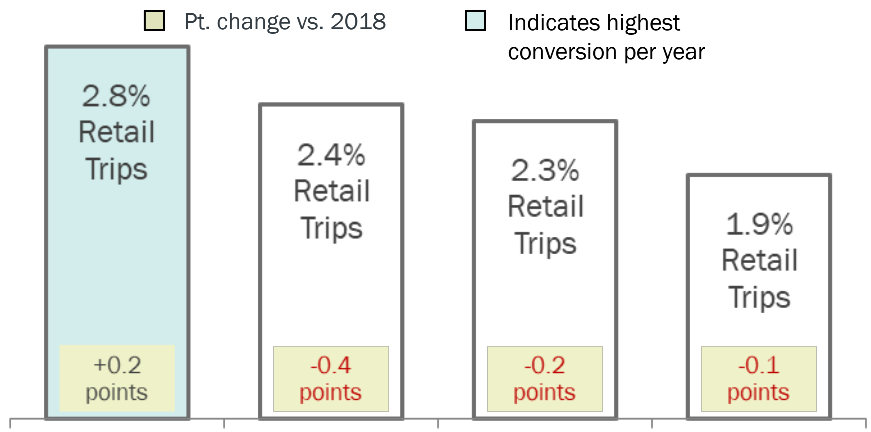
Data source: IRI Consumer Network™

Share of Retail Trips That Include Avocados 2018 – 2021

Avocado purchase conversion peaks in Quarter 1, when total retail trips are lowest.

Avocado purchase conversion hits the lowest point in Quarter 4 (1.9%) when total retail trips peak.

% of Total Retail Trips that Include an Avocado Purchase

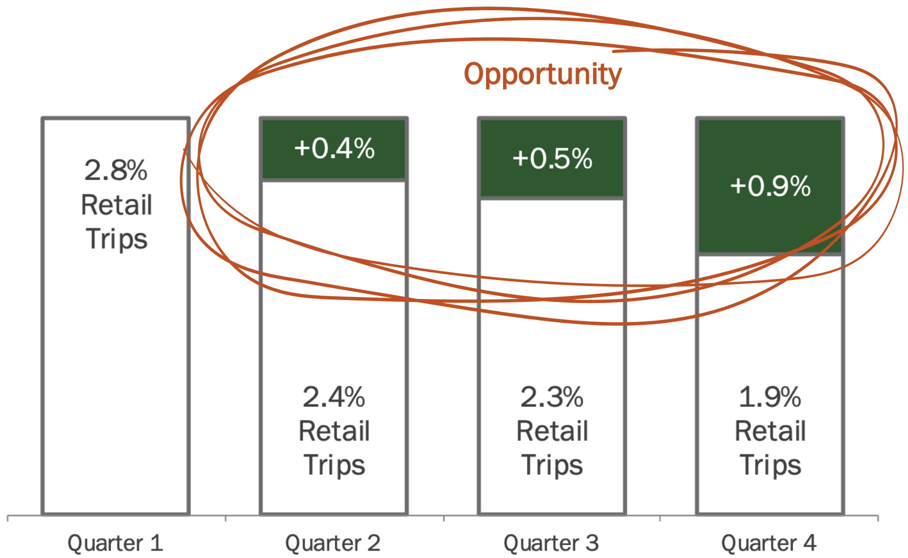


	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2020	2.5%	2.7%	2.7%	2.2%
2019	2.8%	2.3%	2.1%	2.0%
2018	2.6%	2.8%	2.4%	2.0%

Data source: IRI Consumer Network™

Retail Sales Opportunity

Increasing avocado purchase conversion when total retail trips peak (Quarter 4) may be a strong opportunity for category growth



	Quarter 2	Quarter 3	Quarter 4
Trip Opportunity:	+38.1M	+49.9M	+90.9M
Spend/Trip Opportunity:	+$131.6M	+$163.9M	+$316.0M

If Q4 purchase conversion increased to 2.8%, this would add +91 million trips to the category

At 2021 purchase rates, this would add +$316.0M in purchases.

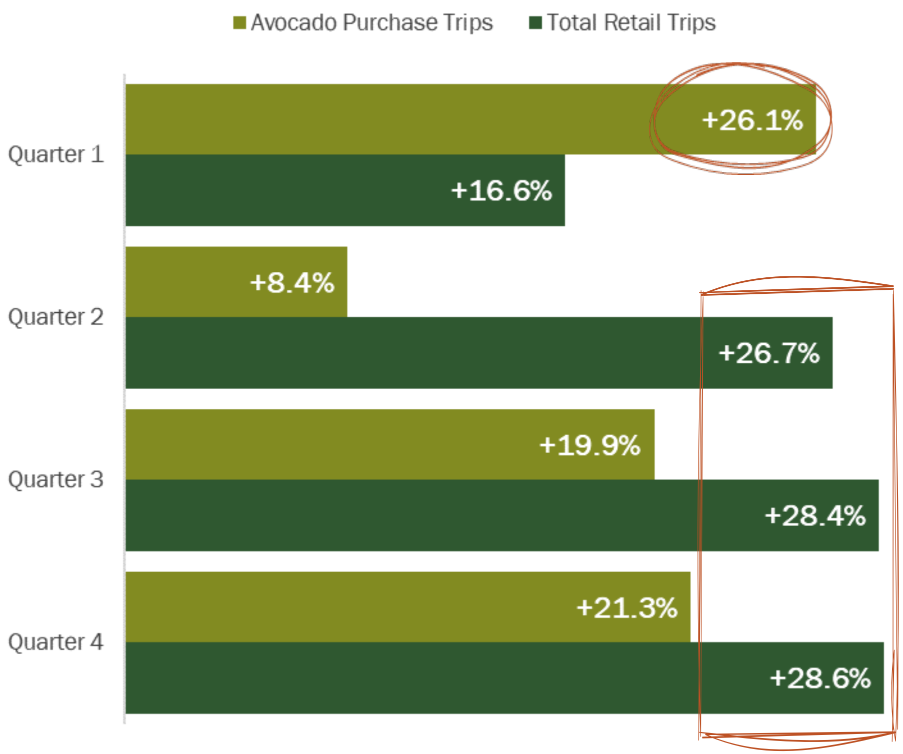
Data source: IRI Consumer Network™

Growth in Total Trips and Avocado Purchase Trips 2021 vs. 2018

Growth potential continues to increase during Quarter 4

Total Retail trips showed the greatest increase during Quarter 4 at +28.6%, while Quarter 1 showed the smallest increase (+16.6%)

Conversely, avocado purchase trips showed the greatest increase during Quarter 1 (+26.1%)

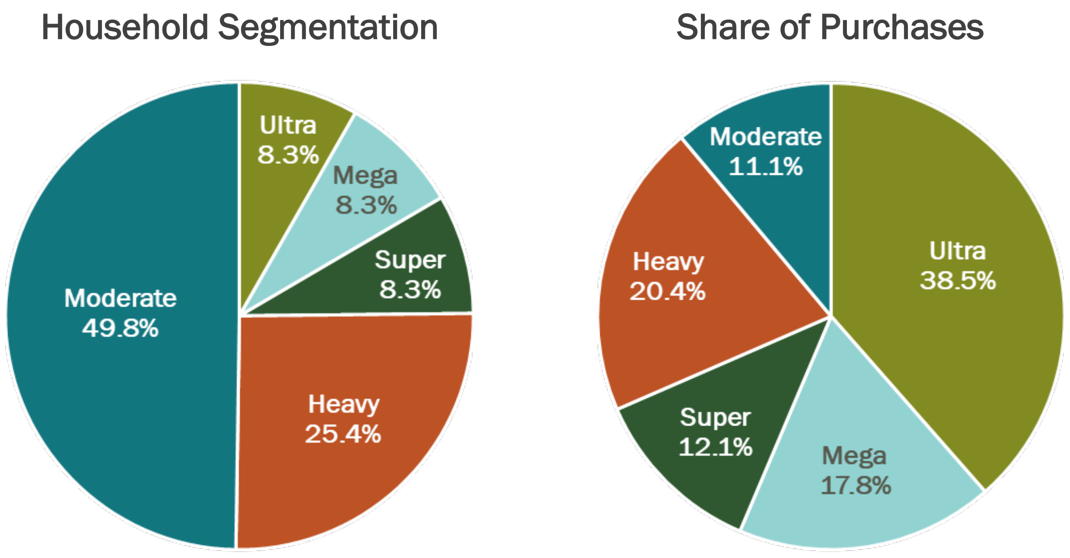


Data source: IRI Consumer Network™

Avocado Shopper Segment Trends

Purchase Trends by Shopper Segment

Household Segmentation and Share of Purchases - 2021



Ultra and Mega segments accounted for nearly 17% of total avocado households, but 56% of 2021 avocado purchases

In contrast, Super, Heavy, and Moderate households comprised 83% of all avocado purchasing households but accounted for only 44% of annual avocado purchases during 2021

Data source: IRI Consumer Network™

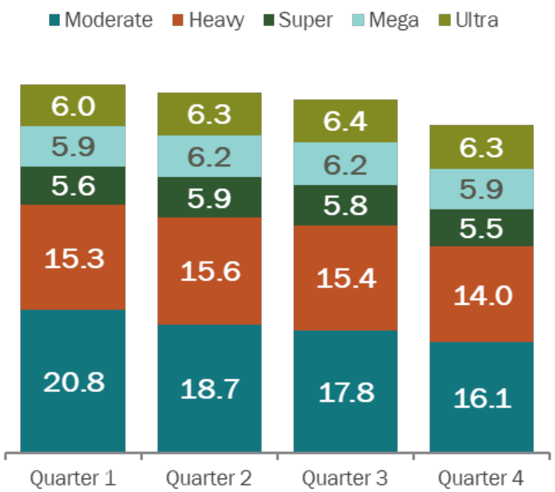
Average Households and Purchases by Segment 2018 – 2021

During 2021, Quarter 1 had the most avocado-purchasing households, driven by an increase in Moderate shoppers

However, the increase in Moderate shoppers in Quarter 1 did not result in higher avocado purchases. Purchases peaked in Quarter 2, driven by greater purchases across all other segments, but particularly Ultra shoppers

Average Avocado-Purchasing Households by Segment

(millions)

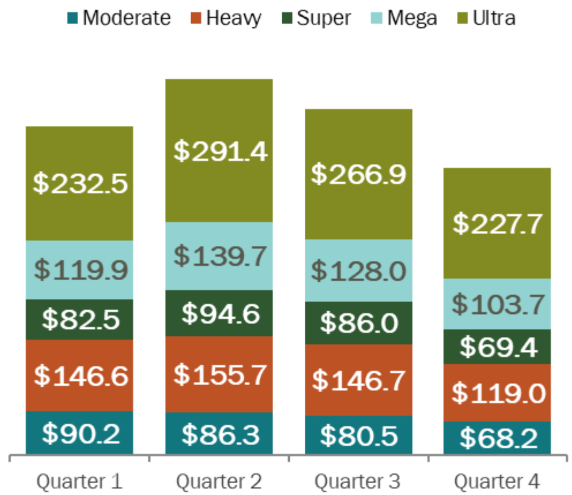


53.7	52.6	51.6	47.8

Average Avocado Households 2018 - 2021 (millions)

Average Avocado Purchases by Segment

(millions)



$671.7	$767.7	$708.2	$588.1

Average Total Purchases 2018 - 2021 (millions)

Segmentation

Data source: IRI Consumer Network™

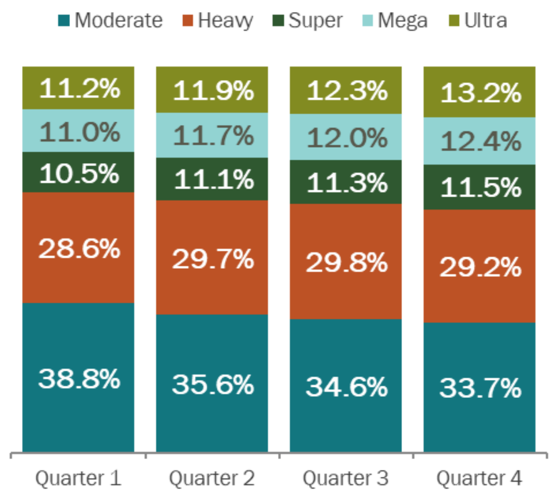
Average Household and Purchase Share by Segment (2018 – 2021)

Ultra households drove nearly 40% of avocado purchases in Quarter 2-4.

Moderate households account for nearly 40% of avocado-purchasing households in Q1, but contributed 13.4% of avocado purchases

Share of Avocado-Purchasing Households by Segment

(millions)

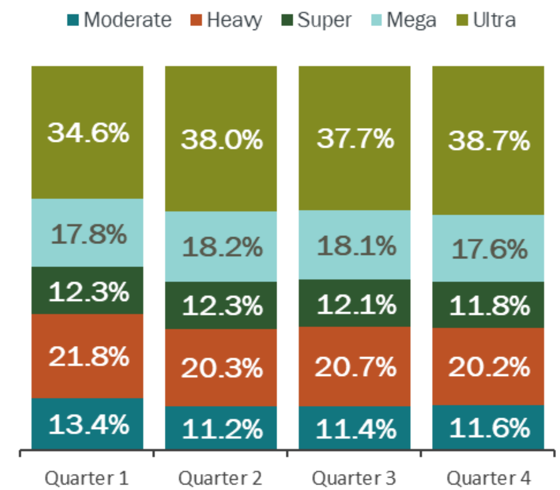


53.7	52.6	51.6	47.8

Average Avocado Households 2018 - 2021 (millions)

Share of Avocado Purchases by Segment

(millions)



$671.7	$767.7	$708.2	$588.1

Average Total Purchases 2018 - 2021 (millions)

Segmentation

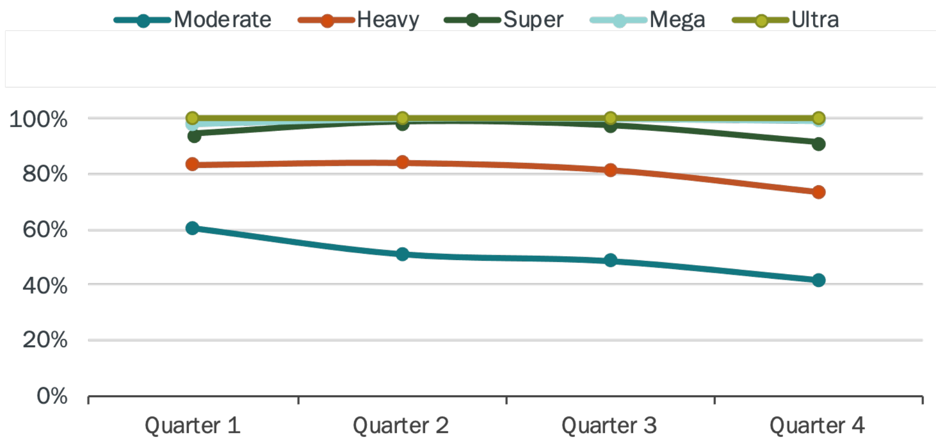
Data source: IRI Consumer Network™

Category Engagement by Segment

% of segment that purchased avocados by Quarter - 2021

Category engagement was highest during Quarter 1 for all segments. Over 60% of Moderates purchased avocados, while 100% of Ultra households purchased avocados

All segments showed less category engagement during Quarter 4, except Ultra households



	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Moderate	60.3%	51.1%	48.7%	42.0%
Heavy	83.6%	84.4%	81.6%	73.2%
Super	94.4%	98.7%	97.4%	91.3%
Mega	98.0%	100%	100%	99.2%
Ultra	100%	100%	100%	100%
Total	75.7%	72.4%	70.7%	64.2%
2018 vs. 2021 Total Variance	+3.8 Pts.	-1.9 Pts.	+0 Pts.	-0.5 Pts.

Indicates highest engagement

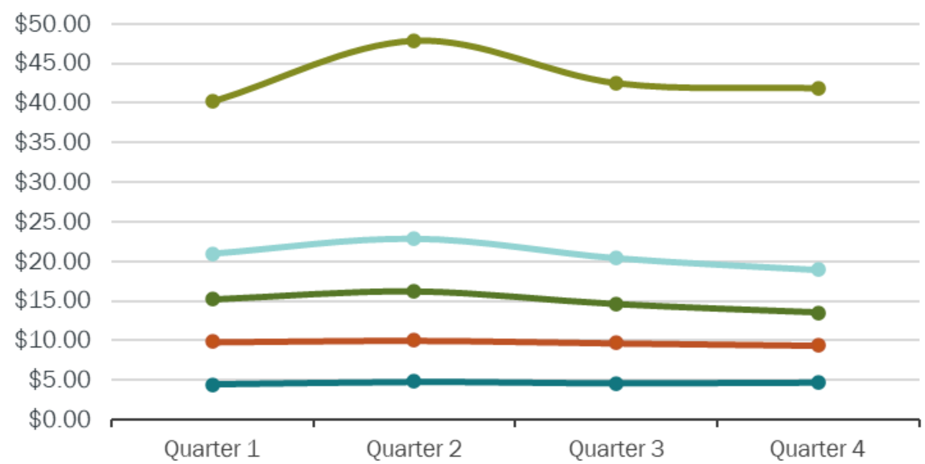
Segmentation

Data source: IRI Consumer Network™

Household Spend by Segment 2021

Avocado spend per household during 2021 was highest among all segments during Quarter 2, led by Ultra households who spent three times more than the average U.S. household

During 2021, Quarter 4 household spend posted the largest increase of +23% since 2018



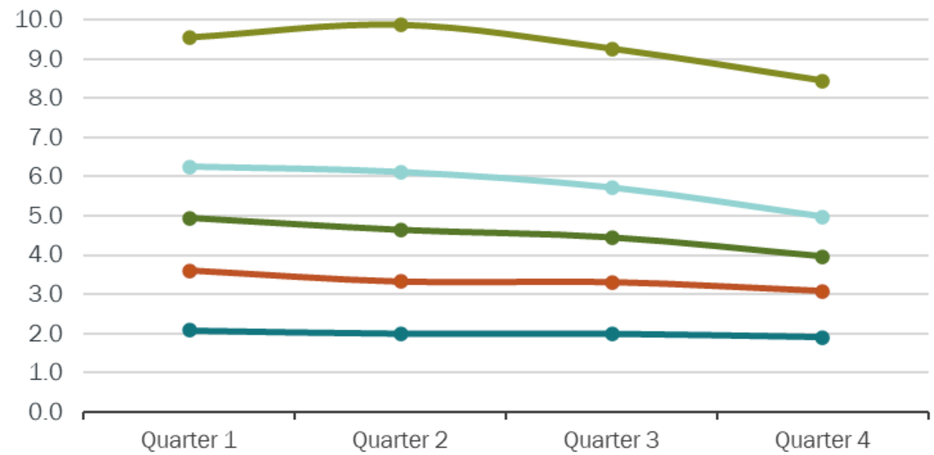
Moderate	$4.39	$4.81	$4.58	$4.70
Heavy	$9.84	$10.03	$9.68	$9.36
Super	$15.20	$16.23	$14.59	$13.50
Mega	$21.00	$22.87	$20.44	$18.96
Ultra	$40.22	$47.79	$42.53	$41.91
Total	$12.88	$15.08	$14.07	$14.13
2018 vs. 2021 Variance	+6.7%	+20.7%	+11.1%	+23.0%

Indicates highest spend per segment

Segmentation

Data source: IRI Consumer Network™

Avocado Purchase Trips per Household 2021



During 2021, avocado purchase trips were highest during Quarter 1 for each segment except Ultra shoppers

Ultra shopper purchase trips peaked in Quarter 2

Quarter 4 marked the lowest number of trips for all household segments

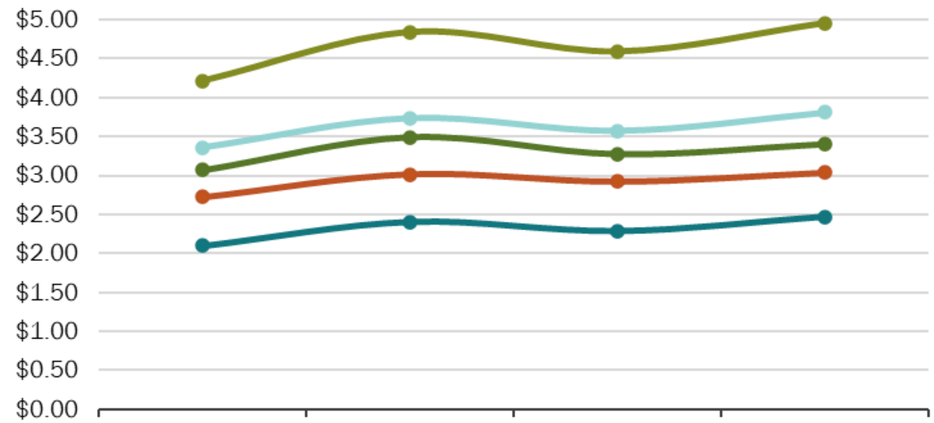
Moderate	2.1	2.0	2.0	1.9
Heavy	3.6	3.3	3.3	3.1
Super	5.0	4.6	4.5	4.0
Mega	6.3	6.1	5.7	5.0
Ultra	9.5	9.9	9.3	8.5
Total	4.8	4.7	4.6	4.4
2018 vs. 2021 Variance	+13.6%	+6.1%	+7.9%	+9.6%

Indicates highest trips per segment

Segmentation

Data source: IRI Consumer Network™

Household Avocado Spend per Trip 2021



In 2021, Quarter 4 marked the highest spend per trip for all segments except Super shoppers

Spend per trip has declined in all Quarters since 2018:

Q1 2021 down -6.1%
Q2 2021 down -27.0%
Q3 2021 down -35.5%
Q4 2021 down -33.3%

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Moderate	$2.10	$2.40	$2.29	$2.47
Heavy	$2.72	$3.02	$2.92	$3.04
Super	$3.07	$3.50	$3.28	$3.41
Mega	$3.36	$3.74	$3.57	$3.81
Ultra	$4.21	$4.84	$4.59	$4.96
Total	$2.69	$3.21	$3.06	$3.18
2018 vs. 2021 Variance	-6.1%	-27.0%	-35.5%	-33.3%

Indicates highest spend per segment

Data source: IRI Consumer Network™

Objective, Terms and Definitions

The objective of this study is to identify data-based insights and growth opportunities for the avocado category based on the market factors impacting avocado seasonality. Specifically, this study measures the impact of avocado shipment volume, retail sales trends and shopper purchase behaviors on avocado seasonality and how it's evolved from 2018 to 2021.

- Product
  - **Avocados**
- Time Periods
  - **2018 – 2021:** Calendar Years and by Quarter
- Geographies
  - **Total U.S.**
- Supply Shipment Volume - All metrics are rounded
  - **Source:** Data compiled by the Hass Avocado Board, using information from arrivals provided by country of origin. Please visit Hassavocadoboard.com for more information
  - **Supply shipment volume** – Supply shipments in pounds
- Retail Sales Data - All metrics are rounded
  - **Source:** IRI. This report reflects a multi-outlet data set (MULO), which includes an aggregation of the following channels: grocery, mass, club (excluding Costco), drug, dollar and military
  - **Dollar Sales**
  - **Volume (Pounds)**
  - **Average Selling Price: ASP =** Dollars / Pounds
  - **All Commodity Volume (ACV) =** Dollar sales of everything scanned in store(s)
  - **Distribution =** % of stores selling the category (Weighted by ACV)
  - **Velocity =** $ per Million ACV = Category sales rate in stores where stocked (weighted by ACV)
    - Shows dollars spent on the category for every million dollars spent in store overall

Objective, Terms and Definitions Cont.

- Shopper Purchase Trends - All metrics are rounded
  - **Source:** IRI Consumer Network^{TM}. Please see slide 38 for more information.
  - **Household (HH) Penetration** – The percentage of households that purchased product
  - **Shoppers/Buyers** – Throughout this report, the term "shoppers" and "buyers" refers to households that purchased the product
  - **Repeat Buyers** – Households that purchased the product more than once per year
  - **Buying Rate** – Annual product dollar spend per product buying household
  - **Trips per Buyer** – Annual number of purchase occasions per product buying household
  - **Dollars Per Trip** – Dollar spend on product per purchase occasion
  - **Purchases** – Household purchases are captured in dollars (no volume or units)
  - **Category Engagement by Segment -** % of shopper segment that purchased avocados in a specified timeframe

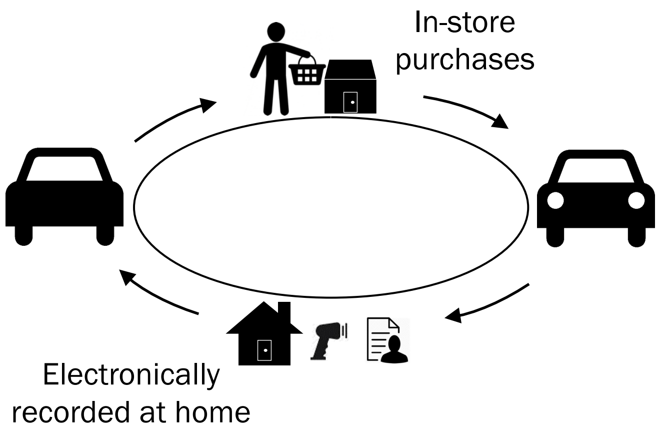
- Study Development:
  - **Fusion** (Gowithfusion.com)

IRI Consumer Network™

This report is partially based on household purchasing data from the IRI Consumer Network™. IRI receives its household purchasing data from the National Consumer Panel (NCP), an operational joint venture by IRI and Nielsen. The NCP is a continuous household purchasing consumer panel that consists of a representative sample of U.S. households who electronically record all purchases. Households are recruited to the NCP and are incented to record all of their purchases, regardless of where purchased, using a handheld in-home scanning device.

Household purchasing data complements retail sales data and provides a deeper understanding of category dynamics by focusing on shoppers and their purchase behaviors. In turn, understanding shopper purchase behaviors helps uncover opportunities for growth and aids in effective sales and marketing decisions.

The household purchasing data in this study was reported using a new database integration between household panel and retail sales data to obtain a deeper understanding of the impact of panel data on retail sales trends. This new integration may impact reporting across many household purchase metrics and may not match prior studies.



Thank you

For additional retail information and insights please visit the Hass Avocado Board website at:

hassavocadoboard.com

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