

Industry Outlook & Global Crop Report

August 19, 2021

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USApple

Roadmap



U.S. & Global Summary



U.S. Production Detail



U.S. Utilization Detail



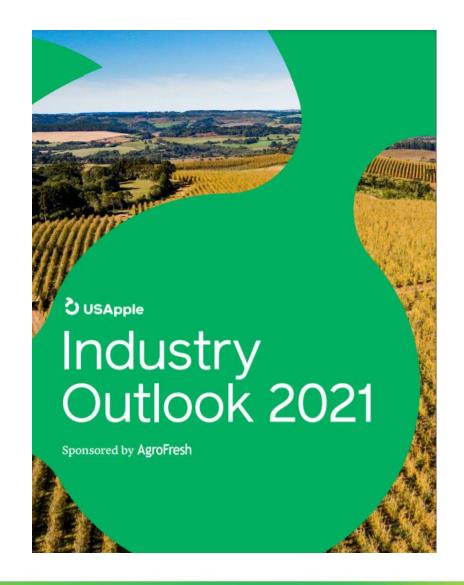
U.S. Trade Detail



Global Production Detail



Other Trends & Forces



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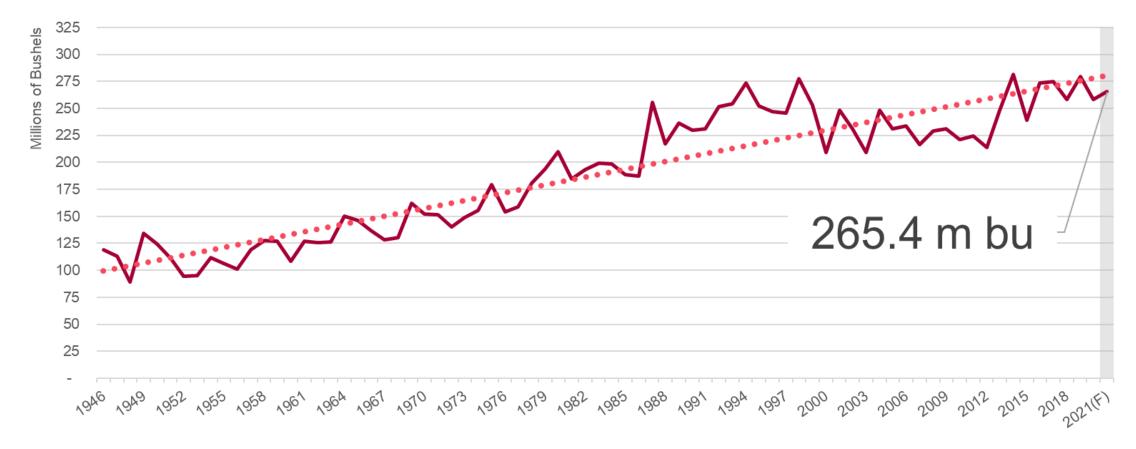
Global Production Detail



Other Trends & Forces



#AppleOutlook2021



Sources: USDA, National Agricultural Statistics Service; USApple

	2021/22 (F)	2020/21	5-Yr. Average	
		LEVELS		
UNITED STATES	265.4	258.6	269.0	
Washington	176.2	164.6	171.6	
New York	32.1	33.0	31.9	
Michigan	18.1	22.1	24.7	
Pennsylvania	11.0	9.9	11.5	
Oregon	4.5	4.2	4.1	
California	4.4	6.5	6.0	
Virginia	4.3	3.9	4.6	
Other	14.8	14.4	14.6	

2021/22 vs.	2021/22 vs.
2020/21	5-Yr. Average
PERCENT	CHANGE
2.7%	-1.3%
7%	3%
-3%	1%
-18%	-27%
10%	-4%
9%	10%
-32%	-27%
10%	-6%
3%	2%

2021/22 (F)	2020/21	5-Yr. Average
	MARKET SHARE	
66%	64%	64%
12%	13%	12%
7%	9%	9%
4%	4%	4%
2%	2%	2%
2%	2%	2%
2%	2%	2%
6%	6%	5%

Sources: USDA, National Agricultural Statistics Service; USApple

Notes: Production levels are in millions of 42-pound bushels.

Five-year averages do not include 2021/22 (F) data.

USDA U.S. total revised to include imputed production from "Other" states.

USDA 2021/22 (F) 250.6 m bu 2.7% YOY

[&]quot;Other" states' production calculated based on 2017 share of U.S. total.

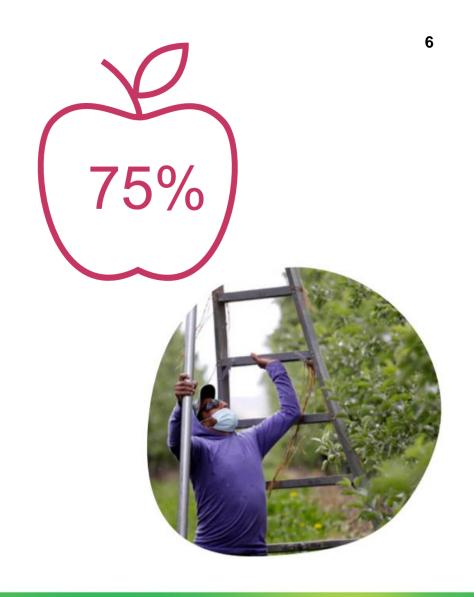
	2021/22 (F)	2020/21	Year-Over-Year % Change
TOTAL SELECTED	3,473.9	3,347.3	3.8%
China	2,374.2	2,313.3	3%
Europe	616.0	561.9	10%
United States	265.4	258.6	3%
South America	160.6	157.1	2%
Mexico	38.8	35.6	9%
Canada	18.9	20.8	-9%

Sources: USDA, National Agricultural Statistics Service & Foreign Agricultural Service;

USApple; United Nations Food and Agricultural Organization;

World Apple and Pear Association; Canadian Horticultural Council

Note: Production levels are in millions of 42-pound bushels.



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Sources: USDA, National Agricultural Statistics Service & Foreign Agricultural Service; USApple; United Nations Food and Agricultural Organization;

World Apple and Pear Association; Canadian Horticultural Council

Note: Production levels are in millions of 42-pound bushels.



Source: Romney Produce

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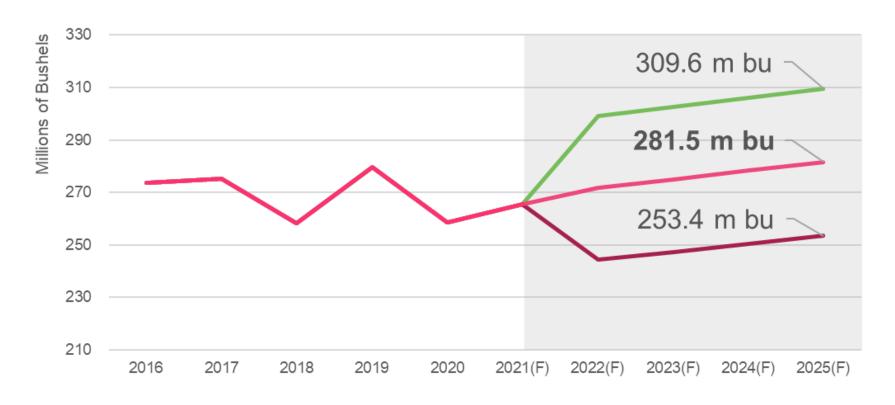
Global Production Detail



Other Trends & Forces



U.S. Apple Production Forecast



MAPE: 4.6%



95% CI: ~28 m bu



Source: USApple

#1 Gala

↓ 4%YOY

#2 Red Delicious



#3 Honeycrisp





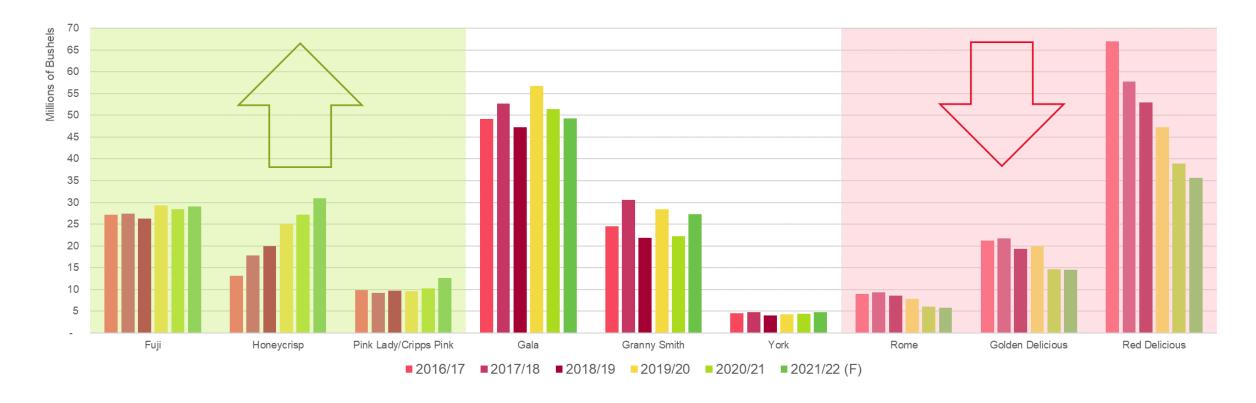
Cosmic Crisp



Sources: USApple; Washington State Tree Fruit Association Note: Production levels are in millions of 42-pound bushels.

Five-year averages do not include 2021/22 (F) data.

	2021/22	(F)	2020/2	1	5-Yr. Average		
TOTAL VARIETIES	265.4		258.6		269.0		
Gala	49.3	19%	51.4	20%	51.4	19%	
Red Delicious	35.7	13%	38.9	15%	52.8	20%	
Honeycrisp	31.0	12%	27.1	10%	20.6	8%	
Fuji	29.1	11%	28.5	11%	27.7	10%	
Granny Smith	27.2	10%	22.2	9%	25.5	9%	
Others	24.6	9%	24.6	10%	18.9	7%	
Golden Delicious	14.5	5%	14.7	6%	19.4	7%	
Pink Lady/Cripps Pink	12.6	5%	10.2	4%	9.7	4%	
Idared	6.9	3%	7.5	3%	7.3	3%	
Rome	5.8	2%	6.0	2%	8.1	3%	
McIntosh	5.5	2%	5.8	2%	6.7	2%	
York	4.8	2%	4.4	2%	4.4	2%	
Cosmic Crisp	4.7	2%	2.1	1%	0.5	0%	
Empire	4.1	2%	4.3	2%	4.9	2%	
Ambrosia	3.0	1%	3.1	1%	2.5	1%	
Cortland	1.9	1%	1.9	1%	1.7	1%	
Newtown Pippin	1.6	1%	2.4	1%	1.7	1%	
Mutsu/Crispin	1.1	0%	1.2	0%	1.4	1%	
Jonathan	0.7	0%	0.8	0%	0.9	0%	
Braeburn	0.5	0%	0.7	0%	1.7	1%	
Spartan	0.3	0%	0.3	0%	0.3	0%	
Stayman	0.2	0%	0.2	0%	0.3	0%	
Rome Sport	0.2	0%	0.2	0%	0.5	0%	

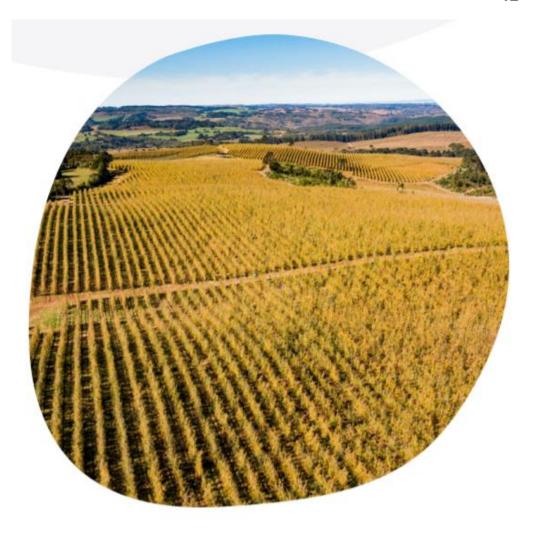


Sources: USApple; Washington State Tree Fruit Association

2021/22 (F)	Product	ion	Value			
UNITED STATES	265.4		3,209.8			
Washington	176.2	66.4%	2,260.9	70.4%		
New York	32.1	12.1%	318.1	9.9%		
Michigan	18.1	6.8%	212.9	6.6%		
Pennsylvania	11.0	4.1%	97.8	3.0%		
California	4.4	1.7%	48.8	1.5%		
Oregon	4.5	1.7%	50.8	1.6%		
Virginia	4.3	1.6%	36.0	1.1%		
Other	14.8	5.6%	184.5	5.7%		

Sources: USDA, National Agricultural Statistics Service, USApple Note: Production levels are in millions of 42-pound bushels.

Value data are in millions of dollars and based on five-year averages: 2016-2020. USDA U.S. total revised to include imputed production from "Other" states. "Other" states' production calculated based on 2017 share of U.S. total.



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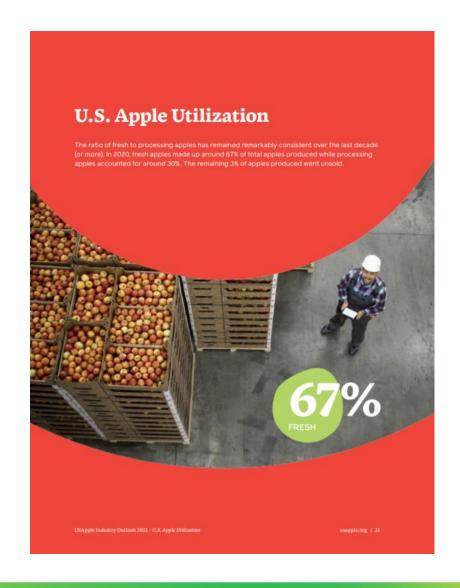
U.S. Trade Detail



Global Production Detail



Other Trends & Forces





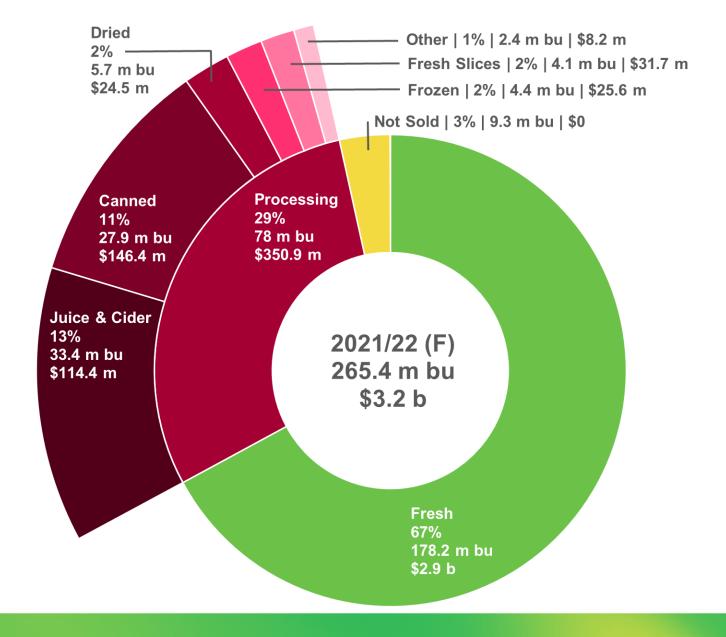
Sources: USDA, National Agricultural Statistics Service; USApple Notes: Fresh, processing and not sold utilization shares are based on five-year averages: 2016-2020.

Sub-processing utilization shares are based on five-year averages: 2013-2017.

Fresh, processing and not sold value data are based on five-year averages: 2016-2020.

Sub-processing value data are based on 2017 price ratios to all processing apples.

Numbers may not sum to total due to rounding.





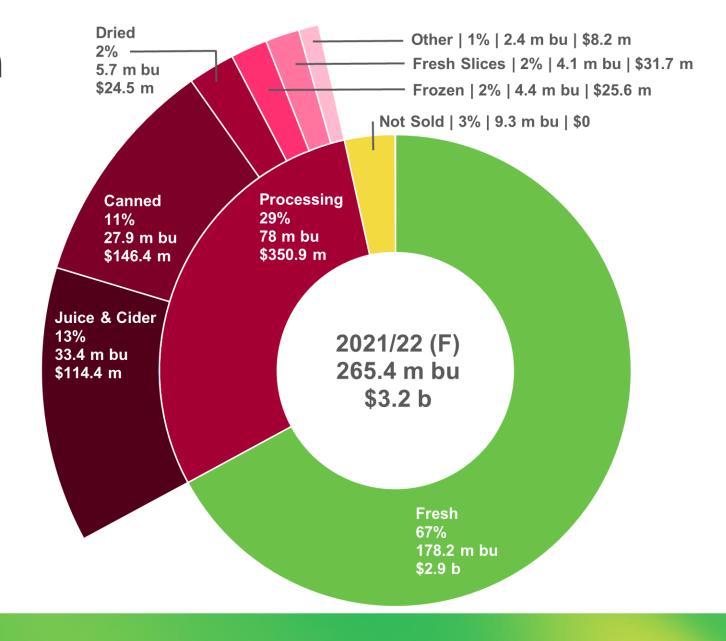
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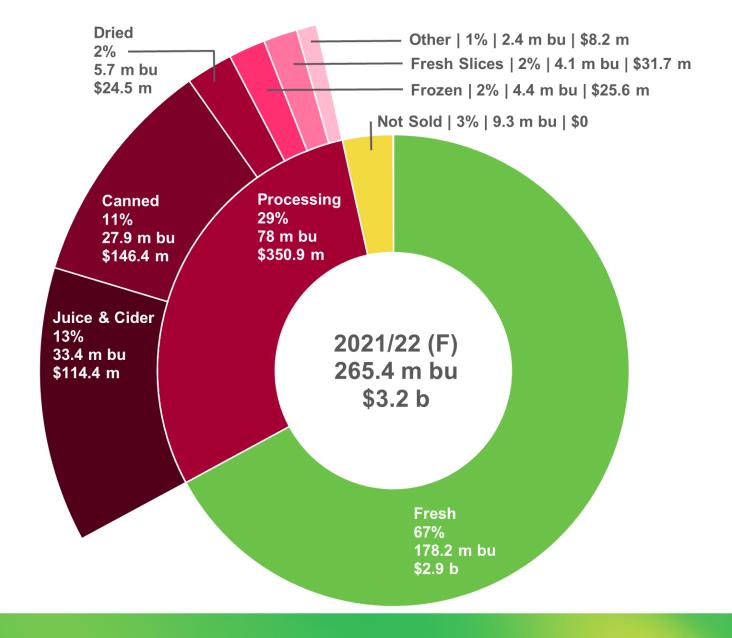
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Fresh, processing and not sold value data are based on five-year averages: 2016-2020.

Sub-processing value data are based on 2017 price ratios to all processing apples.

Numbers may not sum to total due to rounding.



	2016-2020 AVG	Fresh	Processing
	TOTAL VARIETIES	73%	27%
	Ambrosia	81%	19%
	Braeburn	85%	15%
	Cortland	46%	54%
	Cosmic Crisp	78%	22%
	Empire	76%	24%
	Fuji	80%	20%
	Gala	82%	18%
	Golden Delicious	55%	45%
	Granny Smith	77%	23%
\leq	Honeycrisp	65%	35%
	Idared	8%	92%
	Jonathan	46%	54%
	McIntosh	76%	24%
	Mutsu/Crispin	20%	80%
	Newtown Pippin	31%	69%
	Pink Lady/Cripps Pink	82%	18%
	Red Delicious	84%	16%
	Rome	11%	89%
	Rome Sport	49%	51%
	Spartan	97%	3%
	Stayman	21%	79%
	York	2%	98%
	Others	70%	30%

2021/22 (F)	Utilization	% of State % of State % of State % of State	
	FR	ESH	
UNITED STATES	178.2	67%	
Washington	132.6	75%	74%
New York	17.2	54%	10%
Michigan	9.2	51%	5%
Pennsylvania	4.9	45%	3%
Oregon	3.7	82%	2%
Virginia	1.9	43%	1%
California	1.3	29%	1%
Other	7.3	49%	4%
	PROCI	ESSING	
UNITED STATES	78.0	29%	
Washington	34.8	20%	45%
New York	14.7	46%	19%
Michigan	8.9	49%	11%
Pennsylvania	6.0	55%	8%
California	3.1	70%	4%
Virginia	2.4	56%	3%
Oregon	0.8	18%	1%
Other	7.4	50%	9%



Sources: USDA, National Agricultural Statistics Service;

USApple

Notes: Utilization levels are in millions of 42-pound bushels.

Fresh and processing production shares are based on

five-year averages: 2016-2020.

The sum of fresh, processing and not sold apples equals total production.

Source: USApple

Note: Shares do not match those in the state-by-state table as December storages are inclusive of "not sold" apples.

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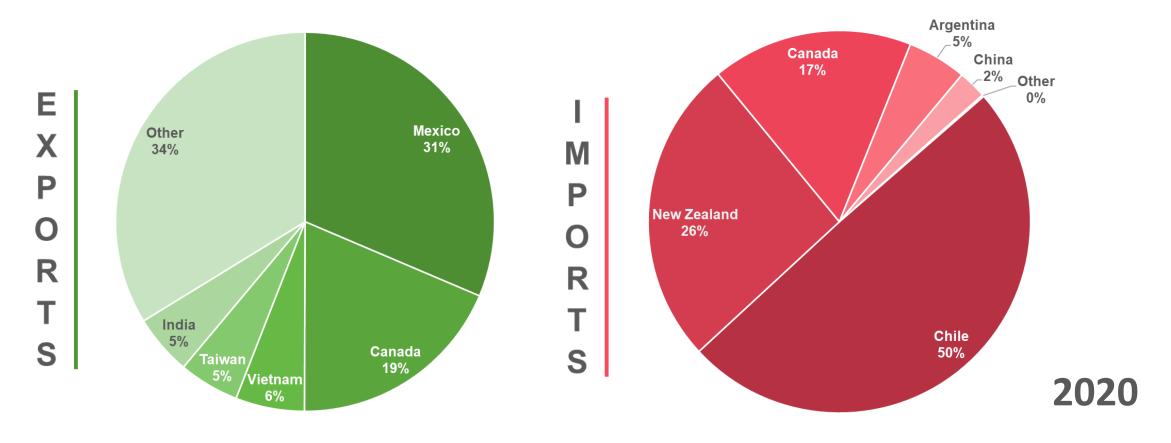
U.S. Fresh Apple Trade

	2020	2019	2018	2017	2016	2	.020 \$
TOTAL U.S. EXPORTS	42.1	43.5	48.5	47.5	40.4	\$	848.7
Mexico	13.2	12.9	14.8	14.8	11.2	\$	240.6
Canada	7.9	7.3	7.8	7.6	7.5	\$	155.8
Vietnam	2.5	2.8	2.0	1.4	1.3	\$	63.2
Taiwan	2.2	4.0	2.3	3.1	3.0	\$	54.1
India	2.2	2.9	7.9	5.3	3.0	\$	37.5
Indonesia	1.5	1.7	1.3	1.7	2.1	\$	30.1
Dominican Republic	1.1	1.1	1.1	1.0	1.0	\$	22.0
Hong Kong	1.1	1.4	1.3	1.8	1.7	\$	22.8
Saudi Arabia	0.9	1.0	1.0	1.1	0.9	\$	16.6
Thailand	0.8	1.1	0.8	0.8	0.8	\$	19.0
Other	8.8	7.3	8.1	9.0	7.8	\$	187.0
TOTAL U.S. IMPORTS	5.7	7.5	6.9	8.7	10.2	\$	157.9
Chile	2.8	4.1	3.3	4.6	5.5	\$	72.1
New Zealand	1.5	1.7	2.1	1.9	2.5	\$	55.9
Canada	1.0	1.1	1.0	1.4	1.3	\$	21.2
Argentina	0.3	0.6	0.3	0.5	0.6	\$	5.8
China	0.1	0.1	0.2	0.2	0.2	\$	2.4
Other	0.0	0.0	0.0	0.0	0.1	\$	0.4
U.S. BALANCE OF TRADE	36.5	36.0	41.6	38.9	30.2	\$	690.8



Sources: USDA, Foreign Agricultural Service; USApple Notes: Trade levels are in millions of 42-pound bushels. Trade values are in millions of dollars.

U.S. Fresh Apple Trade



Sources: USDA, Foreign Agricultural Service; USApple

U.S. AJC Trade

	2020		2	019	Year-Over-Year % Change
		LEVELS			
U.S. BALANCE OF TRADE		(416.7)		(432.6)	-3.7%
Total Exports		12.1		13.3	-9%
Total Imports		428.9		445.9	-4%
		VALUE			
U.S. BALANCE OF TRADE	\$	(368.7)	\$	(388.6)	-5.1%
Total Exports	\$	46.4	\$	51.4	-10%
Total Imports	\$	415.1	\$	440.0	-6%

Sources: USDA, Foreign Agricultural Service; USApple

Note: Trade levels are in millions of gallons.

Sources: USDA, Foreign Agricultural Service, USApple Notes: Trade levels are in millions of gallons.

Year-over-year changes are calculated on levels.

Levels by country for organic frozen apple juice concentrate have been calculated based on the value shares.

1							
	2020	Levels			Values		Year-Over-Year
4							% Change
			JUICE C		ICENTRATE		
	WORLD TOTAL	379.8		\$			-5%
	China	199.9	53%	\$	132.5	37%	154%
	Turkey	68.6	18%	\$	92.8	26%	-18%
	Argentina	31.0	8%	\$	34.0	9%	110%
	Chile	24.4	6%	\$	30.3	8%	61%
_	Poland	19.4	5%	\$	19.0	5%	-79%
		APPLE JUIC	E CONC	EN.	TRATE - FRO	OZEN	
	WORLD TOTAL	40.0		\$	30.9		-7%
	China	24.7	62%	\$	16.9	55%	-2%
	Brazil	12.5	31%	\$	10.8	35%	-6%
	South Africa	1.7	4%	\$	1.6	5%	N/A
	Hungary	0.8	2%	\$	1.0	3%	N/A
	Turkey	0.1		\$	0.2	1%	-96%
Ī		APPLE JUICE	CONC	NT	RATE - BRI	X < 20	
	WORLD TOTAL	8.0		\$	20.6		167%
Ī	Canada	2.8	35%	\$	8.3	40%	138%
	China	2.3	28%	\$	4.9	24%	1865%
	Ukraine	1.1	14%	\$	3.0	15%	132%
	Turkey	0.9	11%	\$	1.9	9%	48%
	Mexico	0.4	5%	\$	1.1	5%	-15%
Ī	AP	PLE JUICE CON	ICENTR	ATI	E - FROZEN	, ORGA	NIC
-	WORLD TOTAL	1.0		\$	1.1		-8%
_	Argentina	0.3	30%	\$	0.3	30%	N/A
	China	0.3	27%	\$	0.3	27%	5097%
	Turkey	0.2	20%	\$	0.2	20%	-74%
	New Zealand	0.1	14%	\$	0.2	14%	-26%
	Austria	0.1	8%	\$	0.1	8%	59%
-							

Roadmap



U.S. & Global Summary



U.S. Production Detail



U.S. Utilization Detail



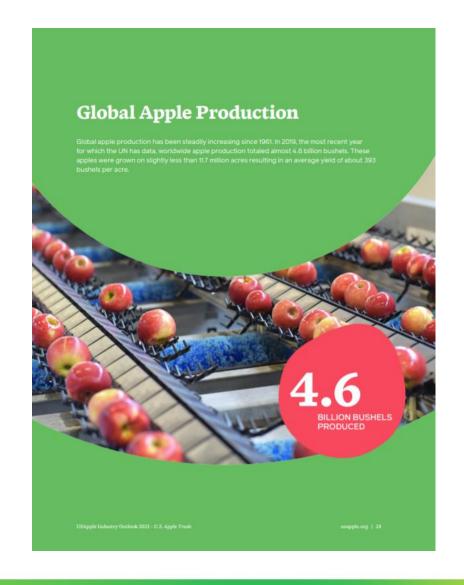
U.S. Trade Detail



Global Production Detail



Other Trends & Forces





Note: Set constants to 0 before using solver.

Smoothing Constants (optimized to minimize MAPE)							
α	β	MAPE	95% CI +/-				
0.916	0.009	3.4%	199,913,010				

Exponential Smoothing "Holt" Model

CHINA Level		Trend Forecast		Error	PCT Error	
2001	1,051,013,164	1,051,013,164	63,113,155			_
2002	1,010,484,113	1,019,155,387	62,304,362	1,114,126,320	(103,642,207)	10.3%
2003	1,107,830,001	1,105,623,721	62,510,148	1,081,459,749	26,370,252	2.4%
2004	1,243,088,950	1,236,817,797	63,095,075	1,168,133,869	74,955,081	6.0%
2005	1,260,668,957	1,263,952,318	62,788,827	1,299,912,872	(39,243,915)	3.1%
2006	1,368,172,999	1,364,706,584	63,112,149	1,326,741,145	41,431,855	3.0%
2007	1,462,707,053	1,459,788,105	63,384,407	1,427,818,733	34,888,320	2.4%
2008	1,566,895,399	1,563,237,303	63,725,608	1,523,172,512	43,722,887	2.8%
2009	1,663,146,064	1,660,118,783	64,007,971	1,626,962,911	36,183,153	2.2%
2010	1,746,121,294	1,744,281,111	64,179,610	1,724,126,754	21,994,540	1.3%
2011	1,888,974,424	1,882,238,206	64,807,915	1,808,460,720	80,513,703	4.3%
2012	2,020,508,982	2,014,362,677	65,381,198	1,947,046,122	73,462,860	3.6%
2013	2,083,046,125	2,082,769,841	65,406,968	2,079,743,875	3,302,251	0.2%
2014	2,148,176,846	2,148,176,843	65,406,968	2,148,176,809	38	0.0%
2015	2,041,914,792	2,056,277,563	64,067,313	2,213,583,811	(171,669,019)	8.4%
2016	2,120,344,884	2,120,344,883	64,067,313	2,120,344,876	8	0.0%
2017	2,172,676,683	2,173,658,541	63,975,733	2,184,412,196	(11,735,513)	0.5%
2018	2,059,483,514	2,074,388,582	62,585,496	2,237,634,273	(178,150,759)	8.7%
2019	2,227,011,485	2,219,478,463	63,288,122	2,136,974,079	90,037,407	4.0%
2020	2,313,276,271	2,310,723,664	63,526,211	2,282,766,585	30,509,687	1.3%
2021		2,374,249,874	63,526,211	2,374,249,874	·	

Source: United Nations, Food and Agriculture Organization; USApple

	2021/22 (F)		2020/2	21	5-Yr. Average		
EUROPE TOTAL	616.0		561.9		586.3		
Poland	218.9	35.5%	179.0	31.9%	89.3	32.3%	
Italy	107.4	17.4%	111.5	19.8%	109.8	18.7%	
France	72.2	11.7%	70.2	12.5%	77.7	13.3%	
Germany	56.7	9.2%	53.7	9.6%	49.7	8.5%	
Spain	28.5	4.6%	22.3	4.0%	25.5	4.4%	
Hungary	27.3	4.4%	18.4	3.3%	27.4	4.7%	
Romania	21.5	3.5%	20.4	3.6%	17.8	3.0%	
Portugal	16.3	2.7%	14.6	2.6%	15.5	2.6%	
Netherlands	13.1	2.1%	11.5	2.1%	13.7	2.3%	
Greece	10.6	1.7%	14.7	2.6%	14.1	2.4%	
Belgium	10.1	1.6%	8.8	1.6%	10.1	1.7%	
United Kingdom	10.0	1.6%	10.3	1.8%	11.2	1.9%	
Czech Rep	6.6	1.1%	6.2	1.1%	6.4	1.1%	
Austria	6.0	1.0%	6.6	1.2%	5.9	1.0%	
Croatia	3.4	0.6%	2.9	0.5%	3.2	0.5%	
Lithuania	1.7	0.3%	3.1	0.6%	2.6	0.4%	
Slovakia	1.6	0.3%	1.6	0.3%	1.5	0.3%	
Sweden	1.4	0.2%	1.7	0.3%	1.3	0.2%	
Slovenia	1.0	0.2%	2.4	0.4%	1.8	0.3%	
Denmark	0.9	0.2%	1.3	0.2%	1.1	0.2%	
Latvia	0.6	0.1%	0.7	0.1%	0.6	0.1%	

	2021/22 (F)		2020/	21	5-Yr. Average		
EUROPE TOTAL	616.0		561.9		586.3		
Golden Delicious	111.3	18.1%	103.3	18.4%	115.1	19.6%	
Gala	82.0	13.3%	75.8	13.5%	71.7	12.2%	
Idared	36.0	5.8%	33.0	5.9%	41.9	7.1%	
Red Delicious	33.6	5.5%	34.6	6.2%	34.3	5.8%	
Shampion	24.4	4.0%	22.2	4.0%	24.9	4.2%	
Red Jonaprince	22.2	3.6%	23.1	4.1%	15.6	2.7%	
Jonagold	21.9	3.6%	16.4	2.9%	22.5	3.8%	
Elstar	18.0	2.9%	16.4	2.9%	17.7	3.0%	
Granny Smith	15.8	2.6%	19.2	3.4%	19.7	3.4%	
Fuji	15.7	2.5%	16.4	2.9%	16.2	2.8%	
Ligol	14.7	2.4%	11.0	2.0%	14.1	2.4%	
Jonagored	13.1	2.1%	13.1	2.3%	20.3	3.5%	
Cripps Pink	12.7	2.1%	14.3	2.6%	14.3	2.4%	
Braeburn	12.7	2.1%	13.2	2.3%	14.6	2.5%	
Other	182.1	29.6%	149.9	26.7%	143.5	24.5%	

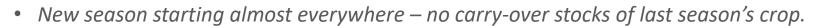
10% YOY

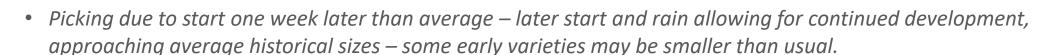
Sources: World Apple and Pear Association; USApple Notes: Production levels are in millions of 42-pound bushels. Five-year averages do not include 2021/22 (F) data.



Regional Commentary

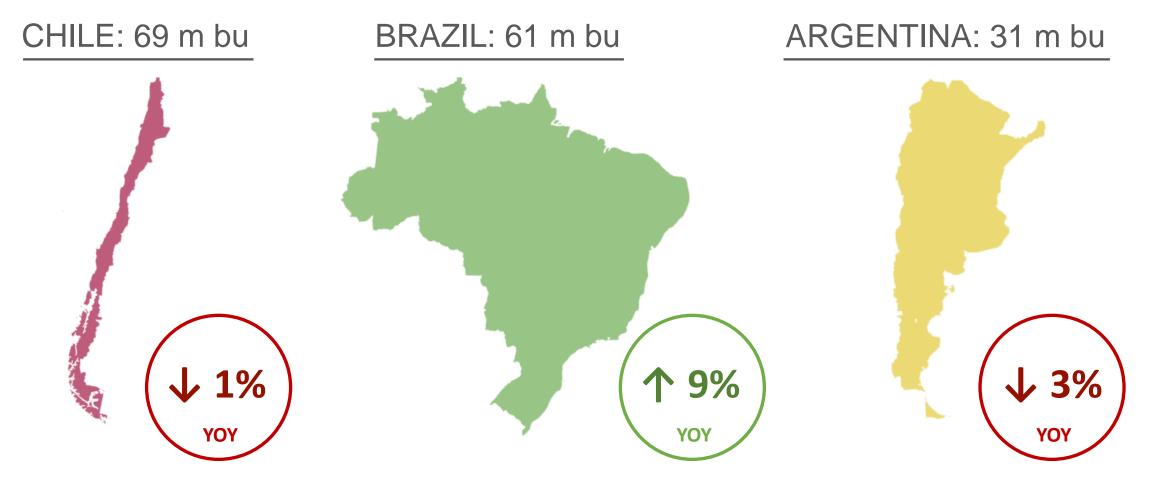
Philippe Binard
Secretary General, World Apple & Pear Association





- Frost damage in April was severe, but less than expected Slovenia, Greece, some Nordic countries and southeastern France hit hardest.
- Frost damage could lead to qualitative issues and higher processing ratios 29%-31% of crop is typically utilized for processing, could increase to 37% this year.
- Organic apples growing, but slowly production expected to be more than 31.5 m bu, around 5%-6% of total crop.





Sources: USDA, Foreign Agricultural Service; World Apple and Pear Association; USApple



Regional Commentary

Leighton Romney CEO, Romney Produce

Many new orchards are coming into production this season which will help in achieving this rather large crop estimate.

About 85% of the crop is Golden Delicious.

Great growing weather with lots of rain in the apple growing areas will make the fruit sizes much larger than last year.

Early prices for Gala and Golden Supreme have been higher than last year.

2021/22 (F)	CANADA
TOTAL VARIETIES	18.9
Gala	3.5
McIntosh	3.1
Ambrosia	2.4
Honeycrisp	1.9
Cortland	1.5
Spartan	1.2
Empire	1.1
Spy	0.9
Red Delicious	0.7
Others	2.7



Source: Canadian Horticultural Council

Notes: Production levels are in millions of 42-pound bushels.

Five-year averages do not include 2021/22 (F) data.

	2021/22 (F)	2020/21	5-Yr. Average					
LEVELS								
CANADA	18.9	20.8	18.1					
Ontario	7.3	8.2	7.2					
Quebec	5.2	5.6	5.6					
British Columbia	4.1	4.9	3.6					
Nova Scotia	2.1	2.0	1.7					
New Brunswick	0.2	0.2	0.2					
P	FRCENT CHANG	E (vs. 2021/22)						
CANADA		-9.3%	4.1%					
Ontario		-11%	1%					
Quebec		-7%	-6%					
British Columbia		-15%	16%					
Nova Scotia		4%	18%					
New Brunswick		25%	15%					
	MARKET	SHARE						
CANADA								
Ontario	38%	39%	40%					
Quebec	28%	27%	31%					
British Columbia	22%	23%	20%					
Nova Scotia	11%	9%	10%					
New Brunswick	1%	1%	1%					

Regional Commentary

Don Werden Sales/Logistics, The Norfolk Fruit Growers' Association

Ontario

- Earliest crop in years
- Overall quality and size look good
- Very dry March, April & May; hot June; very wet July
- Southwest Ontario had severe hailstorms

Quebec

- Early, very warm spring, but two cold spells impacted certain areas
- Rain in July is increasing the size of the fruit

British Columbia

- Heat stress: sunburn issues storability issues weakened and disease susceptible trees
- Incredible drought conditions no rain since March

Nova Scotia

- Good growing conditions, early spring timely rains
- Adequate and timely labor for harvest concerning given delays and restrictions due to COVID-19

New Brunswick

- 2021 crop is looking great, and growers are positive
- Still have some 2020 McIntosh to move



Roadmap



U.S. & Global Summary



U.S. Production Detail



U.S. Utilization Detail



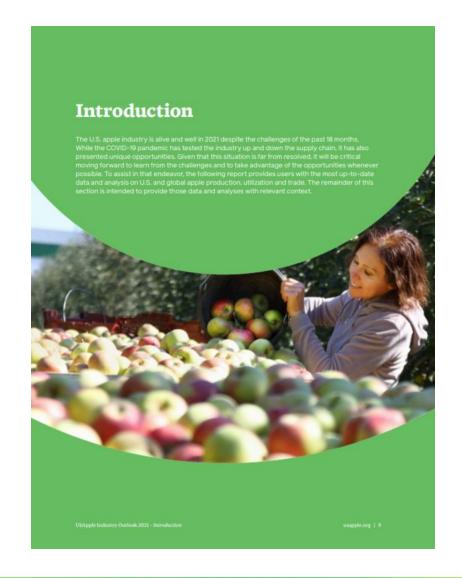
U.S. Trade Detail



Global Production Detail



Other Trends & Forces





COVID-19



Labor



Pricing/Organics



Yield



Climate/Weather



E-Commerce

Pacific Northwest growers estimated that COVID-19 expenses would ultimately increase the cost of production between **2%-10%**.

Most packers estimate an additional increase of **2%-6%** to the cost of production due to COVID-19 measures.

- Northwest Horticultural Council survey, July 2020



- ✓ PPE
- ✓ Labor
- ✓ Construction
- ✓ Housing
- ✓ Transportation
- ✓ Health Care

#AppleOutlook2021



COVID-19



Labor



Pricing/Organics



Yield



Climate/Weather



E-Commerce

Domestic agricultural labor aging out and not being replaced by new immigrants.

From 2014 to 2020, U.S. crop production employment down **3**% – apple orchard employment down **20**%.

In 2011, there were 77,000 H-2A visas, by 2020, that figure was 275,000 – a **257%** increase.

H-2A labor rate (AEWR) increasing by more than **5% annually** over the decade in the Pacific Northwest.

Apple growing and packing are labor intensive – 60%-70% of input costs.





COVID-19



Labor



Pricing/Organics



Yield



Climate/Weather



E-Commerce

Grower prices not increasing
– from 2011-2015 average
farm-gate prices \$0.31/pound
– from 2016-2020 the price
was \$0.30/pound – not
accounting for inflation.

Some inflation at the retail level – 6.5% CPI increase for apples (June 2020-June 2021).

Organics, on average, priced 56% more than their conventional counterparts.

2020/21	R	Regular		Organic		ifference
MEDIAN	\$	1.29	\$	1.99	\$	0.72
Honeycrisp	\$	2.19	\$	2.91	\$	0.72
Pink Lady/Cripps Pink	\$	1.44	\$	2.02	\$	0.58
Granny Smith	\$	1.39	\$	1.99	\$	0.60
Gala	\$	1.34	\$	1.89	\$	0.55
Braeburn	\$	1.33	\$	1.84	\$	0.51
Fuji	\$	1.29	\$	1.97	\$	0.68
Red Delicious	\$	1.25	\$	2.09	\$	0.84
Golden Delicious	\$	1.19	\$	2.06	\$	0.87
Jonagold	\$	1.15	\$	1.99	\$	0.84
Rome	\$	1.13	\$	1.99	\$	0.86
McIntosh	\$	1.11	\$	1.98	\$	0.87

Sources: USDA, Agricultural Marketing Service; USApple Note: Prices represent national averages in \$/LB.





COVID-19



Labor



Pricing/Organics



Yield



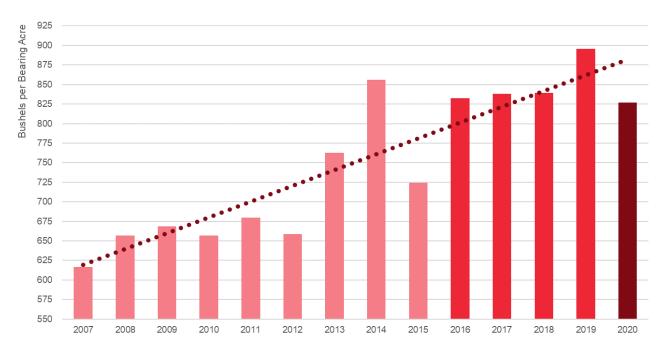
Climate/Weather



E-Commerce

With costs rising and revenues flat, apple growers have to get more efficient ...





Sources: USDA, National Agricultural Statistics Service; USApple



COVID-19



Labor



Pricing/Organics



Yield



Climate/Weather



E-Commerce

Growing uncertainty around the climate change/adverse weather events and the extent to which they are getting more frequent and/or more severe.

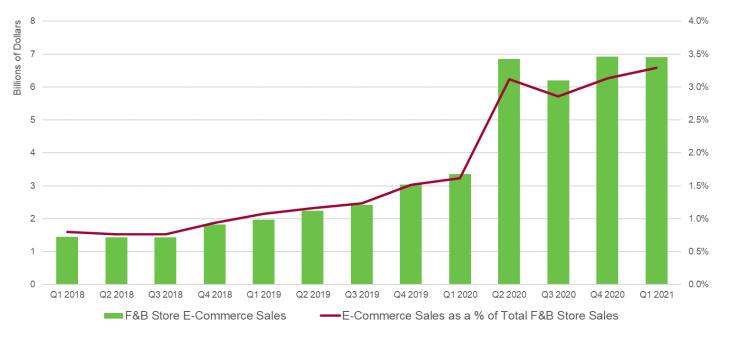
From 1989/90 to 2019/20 apple crop insurance claims went up by 175%, but the number of policies held also rose by a similar amount.

Over the same period, the average claim amount (adjusted for inflation) rose from \$92,500 to \$148,500 – a **60% increase**.





In Q1 2018, e-commerce sales at food and beverage stores was \$1.5 billion (1.5%) – by Q1 2021, that figure was \$6.9 billion (3.5%).



Sources: U.S. Census Bureau; USApple

Questions?

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