

## US Vegetables & Fruits:

Names of team members:

- Ratan Deep Singh, Alan Zhang, Haoyu Zhang

Name of your team's GitHub repository:

- Project2\_Singh\_Zhang\_Zhang  
[https://github.prod.oc.2u.com/rsingh/Project2\\_Singh\\_Zhang\\_Zhang.git](https://github.prod.oc.2u.com/rsingh/Project2_Singh_Zhang_Zhang.git)

Primary dataset:

- US Vegetables and Pulses Yearbook  
Yearbook tables contain a time series (1970 - 2019) of the annual per capita supply and availability data for fresh and processed vegetables and for dry pulse crops. Included are U.S. production, exports, imports, per capita availability, and prices.

Link: <https://www.ers.usda.gov/data-products/vegetables-and-pulses-data/vegetables-and-pulses-yearbook-tables/>

- US Fruit and Tree Nuts Yearbook  
The Fruit and Tree Nuts Yearbook tables contain over 20 years of time-series data for U.S. bearing acreage, production, prices, crop value, trade, per capita use, and more.

Link: <https://www.ers.usda.gov/data-products/fruit-and-tree-nuts-data/fruit-and-tree-nuts-yearbook-tables/>

Key variables of the primary datasets:

- Per capita use of each commodity ( fresh, canning , freezing, juice, dried, other processed)
- Bearing acreage (citrus/non-citrus and etc)
- Utilized production and value of production (citrus/non-citrus and etc)
- Annual average retail prices for selected fresh fruit
- Average price indexes (fruit and nut prices received by growers)
- Total commercial production
- Import and Export values

Supplemental datasets:

- Avocado Prices  
Link: <https://www.kaggle.com/neuromusic/avocado-prices>
- Global Food Prices  
Link: <https://www.kaggle.com/jboysen/global-food-prices>

Explorey of initial dataset:

Table 1a--U.S. per capita availability of selected, commercially produced, fresh and processing vegetables and dry pulse crops.<sup>1</sup>

Crop	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
	Pounds per person												
Asparagus, all	1.33	1.28	1.27	1.29	1.10	1.20	1.22	0.99	0.85	0.74	0.79	0.80	0.72
Asparagus, fresh	0.44	0.38	0.40	0.40	0.39	0.41	0.43	0.34	0.29	0.25	0.29	0.31	0.38
Asparagus, canning	0.59	0.63	0.61	0.64	0.53	0.58	0.53	0.45	0.38	0.32	0.36	0.38	0.28
Asparagus, freezing	0.29	0.27	0.25	0.25	0.18	0.21	0.26	0.21	0.18	0.17	0.13	0.11	0.06
Snap /Green beans, all	7.61	7.46	7.49	8.01	7.70	7.03	7.83	7.52	7.48	7.45	7.23	7.56	6.99
Snap /Green beans, fresh	1.55	1.51	1.53	1.43	1.36	1.45	1.45	1.34	1.29	1.31	1.31	1.26	1.26
Snap /Green beans, canning	4.67	4.56	4.62	4.90	4.87	4.45	4.88	4.82	4.82	4.74	4.55	4.64	4.20
Snap /Green beans, freezing	1.39	1.39	1.35	1.68	1.47	1.14	1.50	1.36	1.37	1.40	1.36	1.67	1.54
Broccoli, all	1.50	1.62	1.63	1.77	1.78	2.00	2.20	2.32	2.40	2.59	2.86	3.22	3.50
Broccoli, fresh	0.53	0.72	0.70	0.76	0.79	0.99	1.08	1.23	0.99	1.20	1.40	1.66	1.99
Broccoli, freezing	0.97	0.90	0.93	1.01	1.00	1.01	1.12	1.09	1.42	1.39	1.46	1.56	1.52
Cabbage, all	10.98	11.29	10.56	10.99	11.09	10.97	10.58	10.47	10.64	10.11	9.98	10.18	10.25
Cabbage, fresh	8.67	8.82	8.37	8.86	8.83	8.91	8.36	8.28	8.55	8.05	8.00	8.15	8.56
Cabbage, canning	2.30	2.47	2.19	2.13	2.27	2.05	2.22	2.19	2.09	2.06	1.99	2.03	1.70
Carrots, all	9.51	9.48	10.42	10.74	10.70	9.95	9.95	8.97	8.68	9.58	9.62	9.56	9.54
Carrots, fresh	5.97	6.12	6.54	6.70	6.91	6.44	6.41	5.31	5.31	5.89	6.15	6.12	6.60
Carrots, canning	2.14	2.02	2.43	2.27	2.01	1.91	1.90	1.89	1.59	1.81	1.79	1.56	1.20
Carrots, freezing	1.40	1.34	1.45	1.77	1.78	1.60	1.64	1.77	1.77	1.88	1.69	1.89	1.75

Table 4 --Potatoes: U.S. per capita availability

Year	Fresh	Freezing	Chipping	Dehy- drating	Canning	Processing, total	Potatoes, total
1970	61.80	28.50	17.40	12.00	1.96	59.86	121.66
1971	56.10	30.10	17.20	12.30	2.12	61.72	117.82
1972	57.90	30.30	16.70	12.40	2.11	61.51	119.41
1973	52.40	34.20	16.30	13.10	2.24	65.84	118.24
1974	49.40	35.30	15.70	14.50	2.30	67.80	117.20
1975	52.60	37.10	15.50	14.70	2.00	69.30	121.90
1976	49.40	41.80	15.80	16.30	1.95	75.85	125.25
1977	50.10	42.20	16.20	11.40	2.21	72.01	122.11
1978	46.00	42.60	16.50	12.10	2.26	73.46	119.46
1979	49.30	38.50	16.70	11.20	2.11	68.51	117.81
1980	51.12	35.40	16.50	9.80	1.93	63.63	114.75
1981	45.84	41.49	16.60	10.80	1.79	70.67	116.52

Avocados: U.S. imports by value (\$1,000)

		Quarter 1			Quarter 2			Quarter 3			Quarter 4			Ann
Fresh <sup>1</sup>	Market year <sup>2</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	2020	280,972	237,050	247,597	190,781	204,209	NA	NA	NA	NA	NA	NA	NA	1,160,609
	2019	217,555	165,015	218,508	322,187	270,815	218,729	294,006	237,703	224,019	216,135	177,548	199,265	2,761,486
	2018	210,504	182,161	206,933	223,211	179,467	180,286	188,226	262,554	190,553	182,957	178,485	163,051	2,348,388
	2017	207,388	182,421	224,948	224,357	210,834	221,098	181,054	257,137	322,733	220,883	170,644	216,061	2,639,559
	2016	161,251	113,825	121,066	120,049	144,379	104,369	171,467	164,853	242,517	239,007	158,690	175,439	1,916,917
Prepared or preserved	Market year <sup>2</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	2020	42,576	37,867	38,994	30,254	28,643	NA	NA	NA	NA	NA	NA	NA	178,335
	2019	34,634	31,357	34,834	34,093	33,332	32,770	37,804	43,797	41,199	39,138	33,737	36,760	433,454
	2018	33,959	30,516	32,528	34,651	32,813	29,592	29,473	33,843	27,962	34,246	27,298	29,312	376,192
	2017	22,897	19,496	21,203	23,619	25,239	25,248	23,942	25,949	24,437	31,964	30,569	28,954	303,515
	2016	20,105	17,744	18,027	19,825	18,236	16,054	15,440	16,186	15,242	19,353	21,051	24,001	221,263

Totals may not add due to rounding. Merchandise entering the United States for consumption.

What we plan to cover in the final report:

- What is the dominant type of vegetable over years (processed Vs fresh food)?
- Evolution of the diet habit over the years (proportion of fresh, canned, frozen, juice, and dried fruit).
- What are the most popular fruits/vegetables over these years, is there any notable difference between generations ?
- Variance of popularity of vegetables and fruits over seasons/months.
- What is the favorite vegetable/fruit for the farmers, considering bearing acreage, growers income, etc.?
- Connection between certain vegetable/fruit's import and export behaviors and its domestic popularity.
- Popularity of veggies over the years. Are Americans eating in a healthier way or in the opposite situation? (Considering that West diets are high in added sugars, sodium, and saturated fats)