Planasa

INNOVATION IN PLANT VARIETIES

BERRIES MARKET ANALYSIS
WEEK 20 2020

Berries market price analysis

Work in progress

Brief project description

Weekly market price analysis taken from public databases

Commodities: blueberry, raspberry and strawberry fruit (fresh produce)

Countries: USA and Spain

Data: this analysis includes:

(i) Market prices

(ii) Imported volumes of fruit (USA)

Technologies:

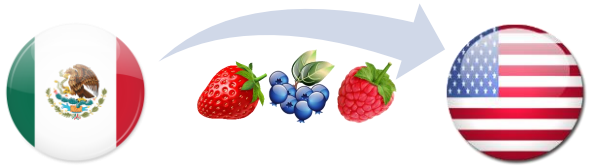
ETL process developed in Python Notebooks (see annexes)

Graphs built in Power BI

Berries market price analysis

USA shipping point prices contextualization

Work in progress



Data Source: United States Department of Agriculture (USDA)

Data kind: shipping point market prices and imports volumes (non-organic fruit)

Origin of the fruit: Mexico

Location for sales: customs of Otay Mesa, Pharr, St. Luis, Laredo, Nogales, Progreso and Calexico

Historical depth available: +20 years

Formats: flats 12 6-oz cups with lids for blueberry and raspberry

flats 8 1-lb containers with lids for strawberry

Periodicity: daily

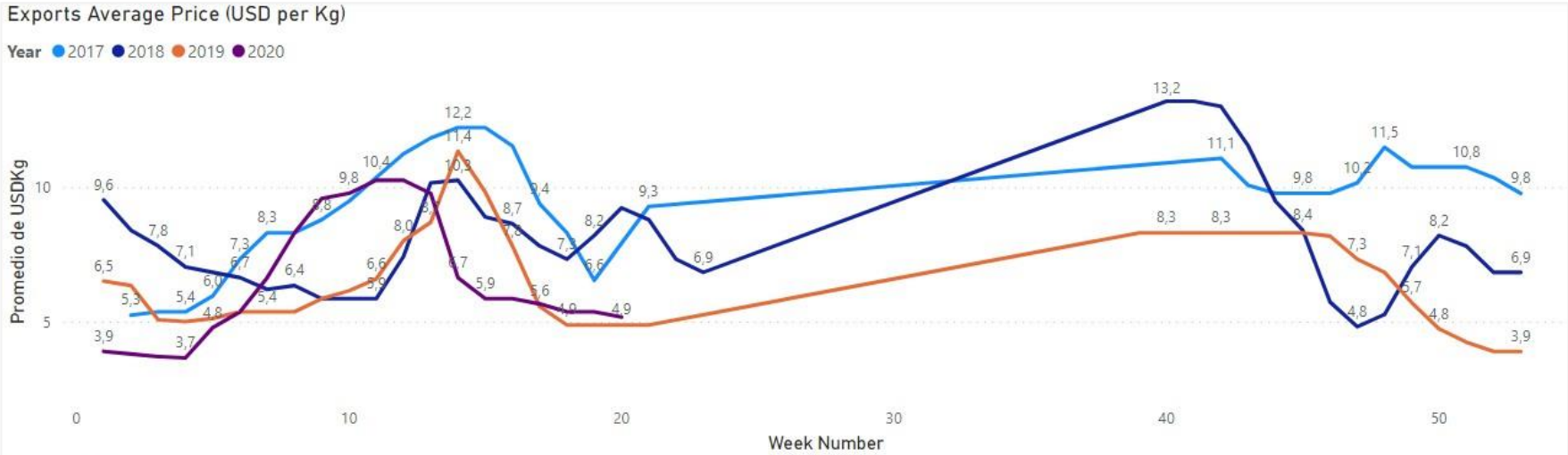
Units of measure: volumes in Kg

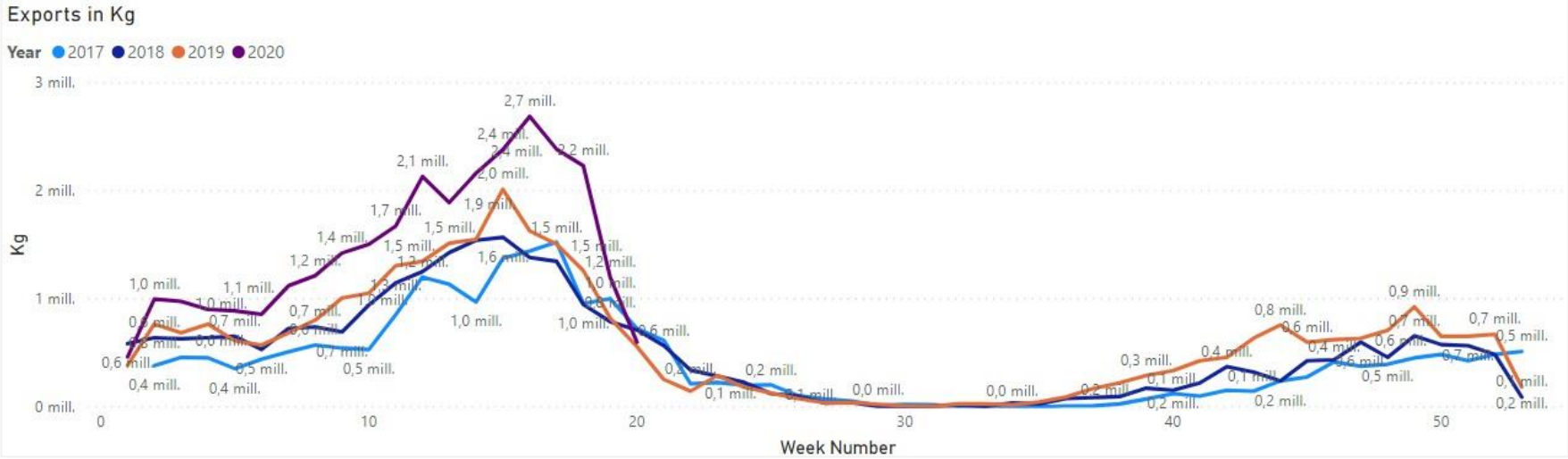
prices in USD/Kg including palletizing and cooling

Berries market price analysis

USA shipping point prices and volumes blueberry evolution

Work in progress

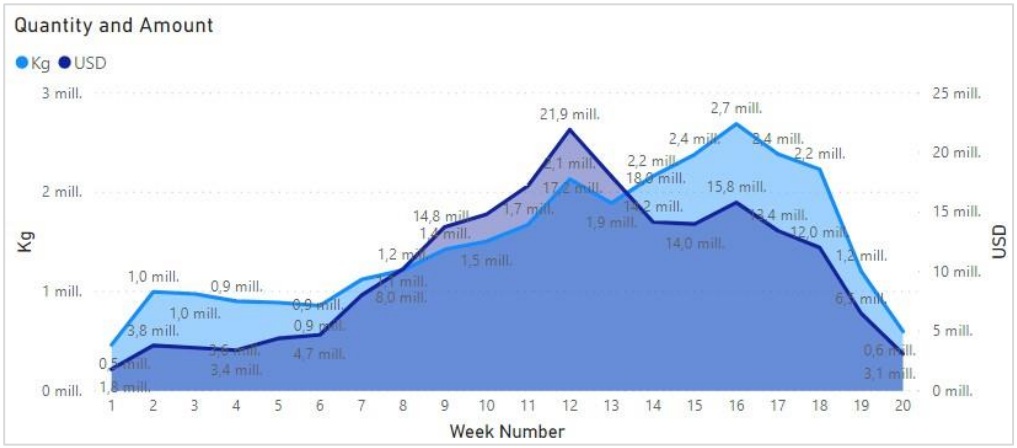


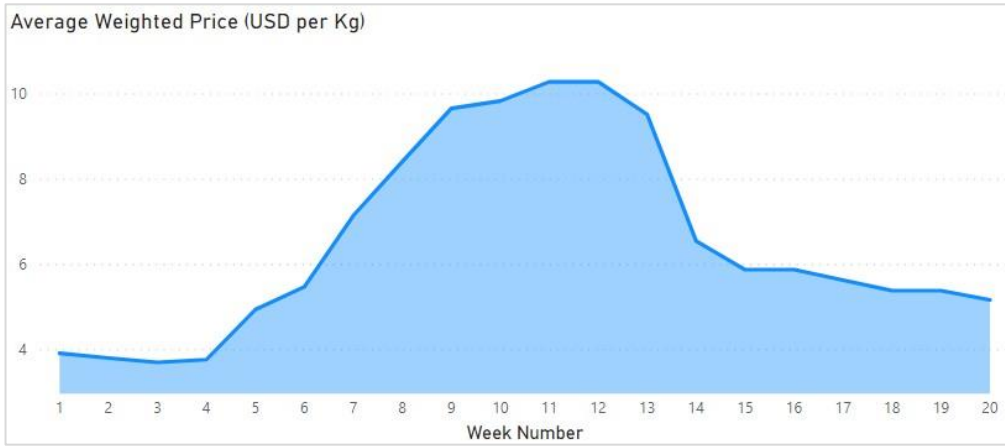


Berries market price analysis

Work in progress

USA shipping point prices and volumes blueberry during 2020





Total Year Kg

29,70 mill.

Total Year USD

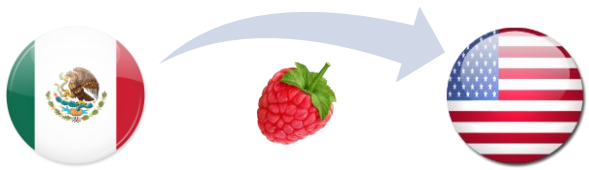
204,72 mill.

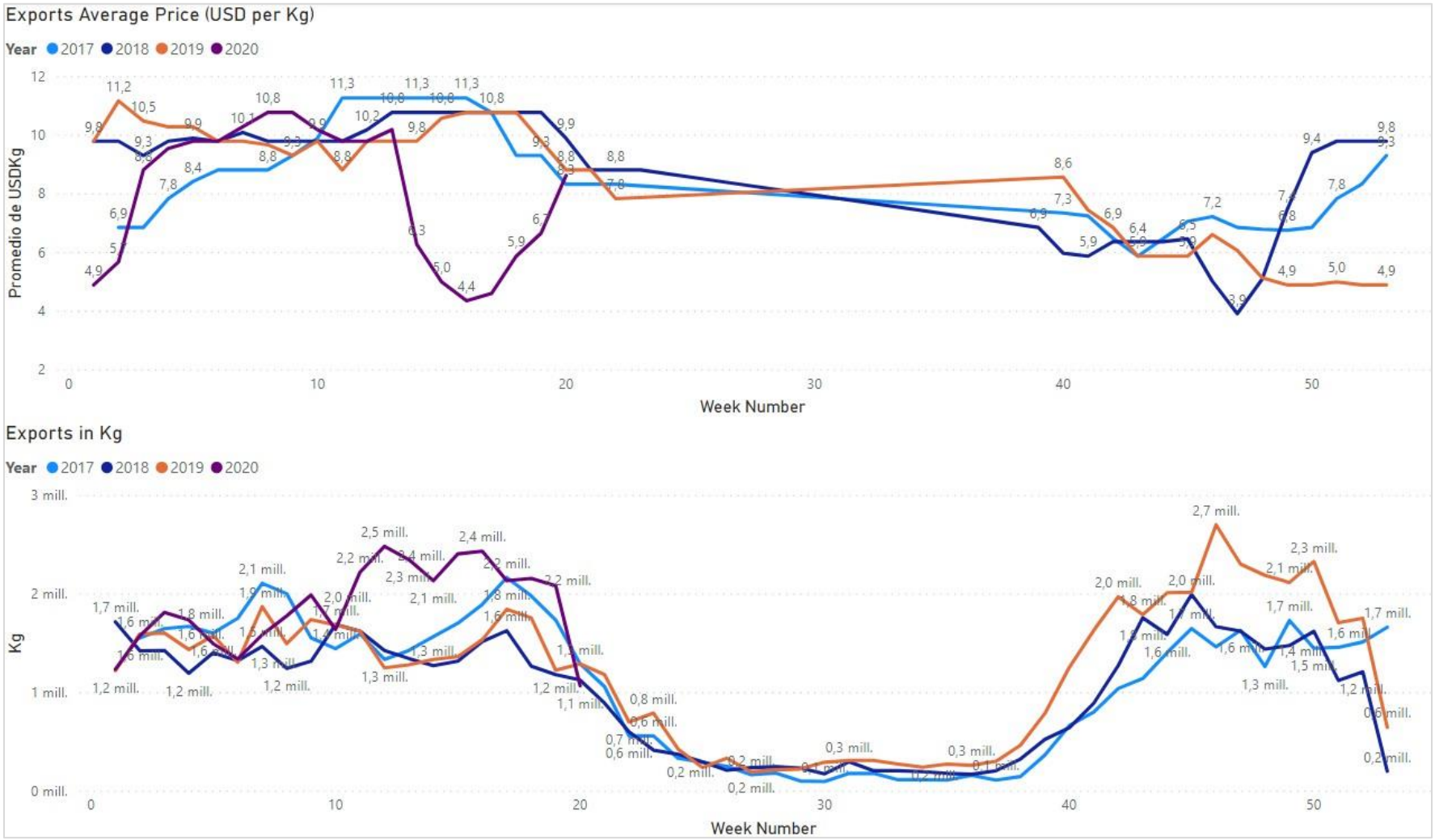
Year	2017	2018	2019	2020
Average	9,40	8,22	6,70	6,60
Standard Dev	2,00	2,15	1,79	2,28
Minimum	4,90	4,78	3,92	3,67
1st percentil	8,33	6,86	5,14	5,39
2nd percentil	9,80	7,84	6,37	5,88
3rd percentil	10,78	9,31	8,33	9,06
Maximum	12,74	13,23	11,76	10,29
Price wk 20	9,31	9,25	4,90	5,19

Berries market price analysis

USA shipping point prices and volumes raspberry evolution

Work in progress

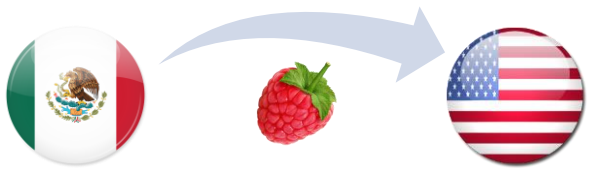


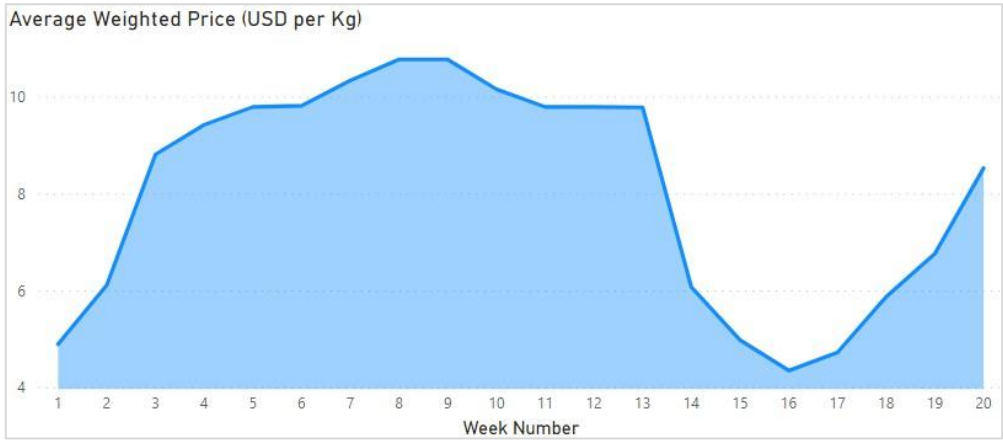


Berries market price analysis

USA shipping point prices and volumes raspberry during 2020

Work in progress





Total Year Kg

37,70 mill.

Total Year USD

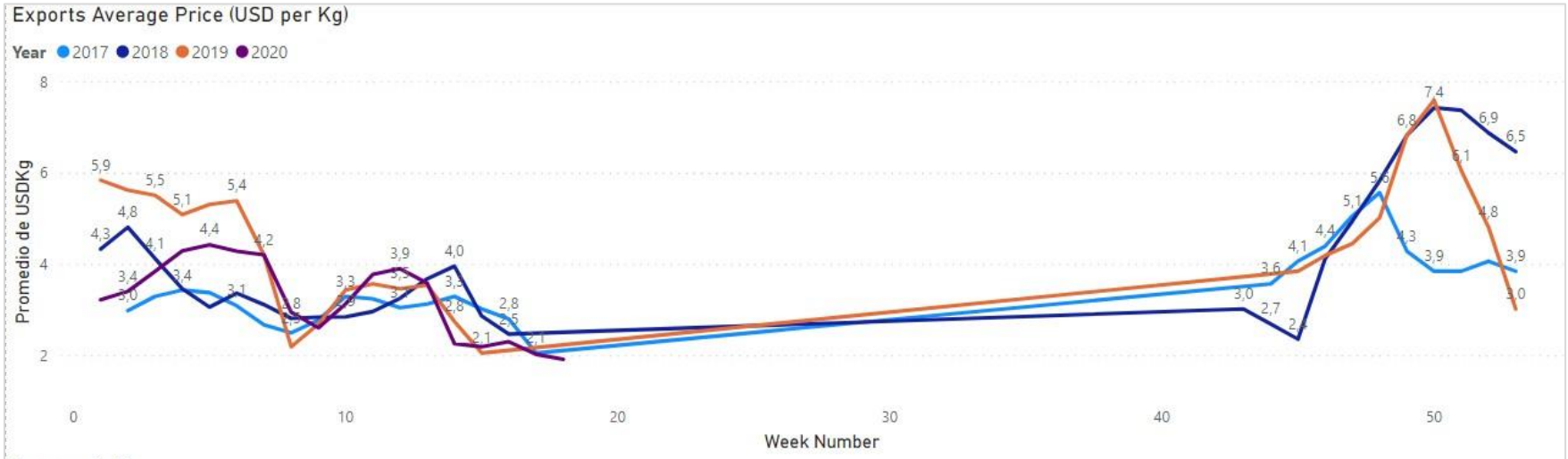
300,54 mill.

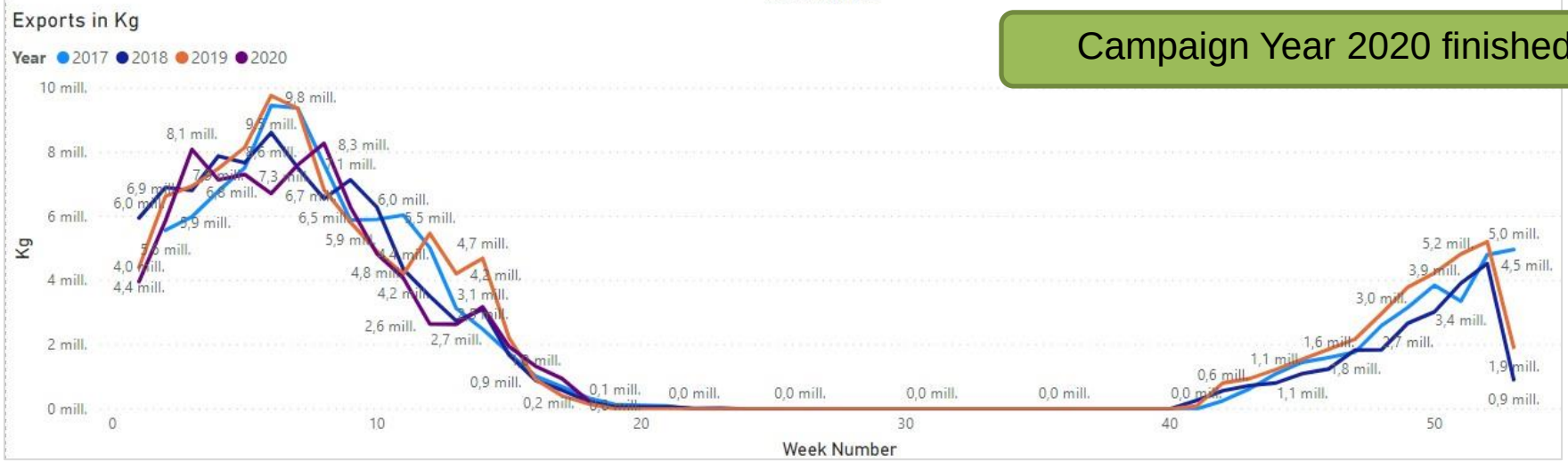
Year	2017	2018	2019	2020
Average	8,58	8,83	8,43	8,15
Standard Dev	1,69	1,97	2,10	2,30
Minimum	5,88	3,92	4,90	4,16
1st percentil	6,86	6,86	5,88	5,88
2nd percentil	8,33	9,80	9,31	8,82
3rd percentil	9,31	10,29	9,80	9,80
Maximum	11,27	10,78	11,27	10,78
Price wk 20	8,33	9,90	8,82	8,62

Berries market price analysis

USA shipping point prices and volumes strawberry evolution

Work in progress



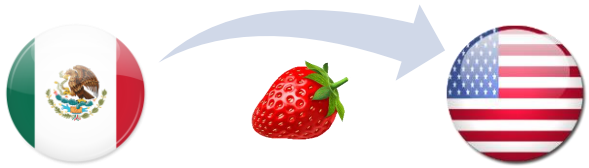


Campaign Year 2020 finished

Berries market price analysis

USA shipping point prices and volumes strawberry during 2020

Work in progress



Total Year Kg

83,13 mill.

Total Year USD

296,76 mill.

Year	2017	2018	2019	2020
Average	3,47	4,09	4,52	3,28
Standard Dev	0,78	1,58	1,45	0,85
Minimum	2,07	2,07	1,93	1,93
1st percentil	3,03	2,93	3,48	2,38
2nd percentil	3,31	3,44	4,41	3,31
3rd percentil	3,86	4,82	5,51	4,00
Maximum	5,65	7,72	7,72	4,55
Price wk 20	-	-		

Campaign Year 2020 finished

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Berries market price analysis

Spanish farm gate prices contextualization

Work in progress

Data Source: Junta de Andalucía

Data kind: farm gate prices paid to farmers

Origin of the fruit: Andalucía

Historical depth available: 4 years available

Formats: standard for strawberry

non specified for blueberry and raspberry

Periodicity: weekly

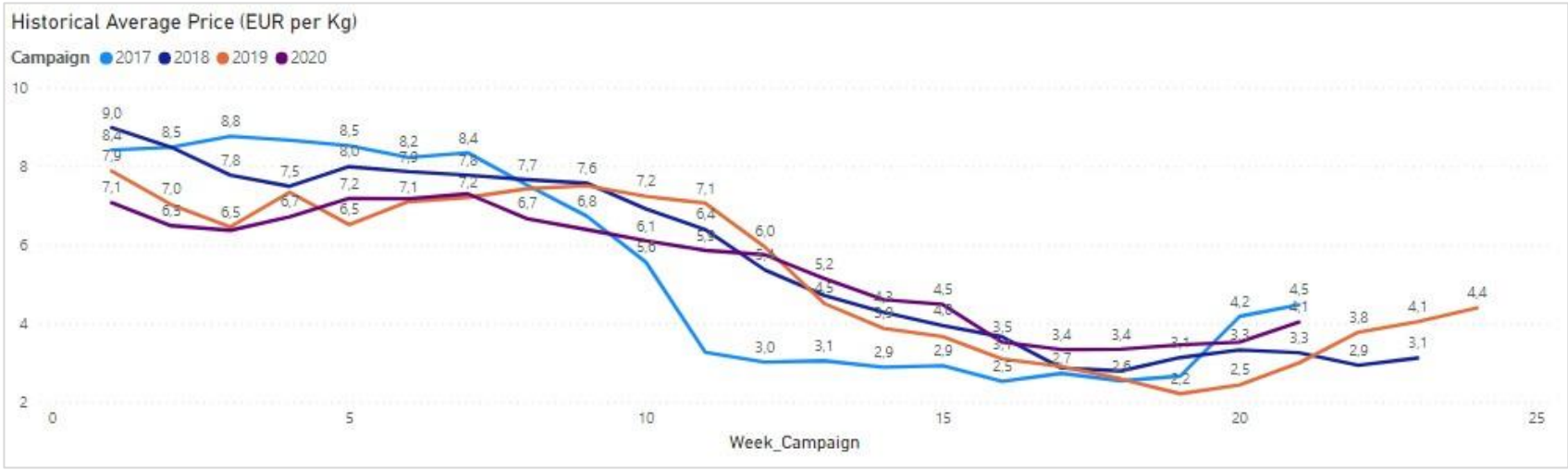
Units of measure: volumes in Kg

prices in EUR/Kg

Berries market price analysis

Spanish farm gate prices blueberry

Work in progress

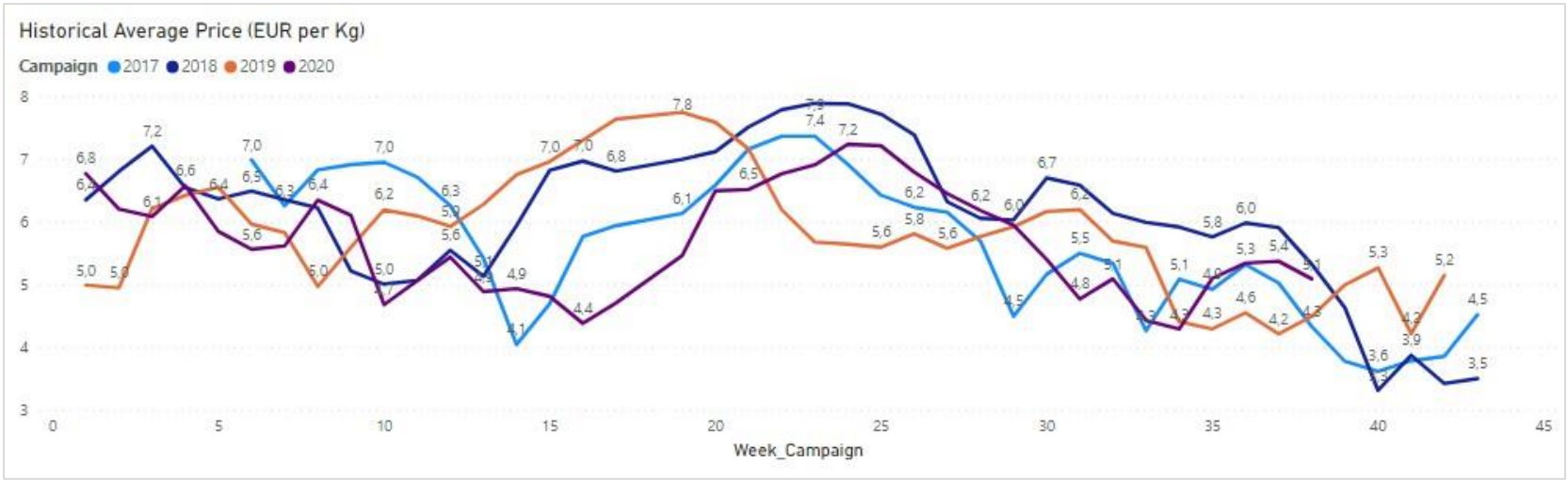


Campaign	2017	2018	2019	2020
Starting week	02/01/2017	01/01/2018	31/12/2018	30/12/2019
Average	5,42	5,59	5,31	5,39
Standard Dev	2,60	2,22	1,98	1,45
Minimum	2,54	2,81	2,23	3,35
1st percentil	2,94	3,31	3,68	3,92
2nd percentil	4,49	5,38	5,97	5,82
3rd percentil	8,36	7,73	7,12	6,55
Maximum	8,78	9,00	7,89	7,31
Campaign wk 20	4,49	3,27	3,01	4,05

Berries market price analysis

Spanish farm gate prices raspberry

Work in progress

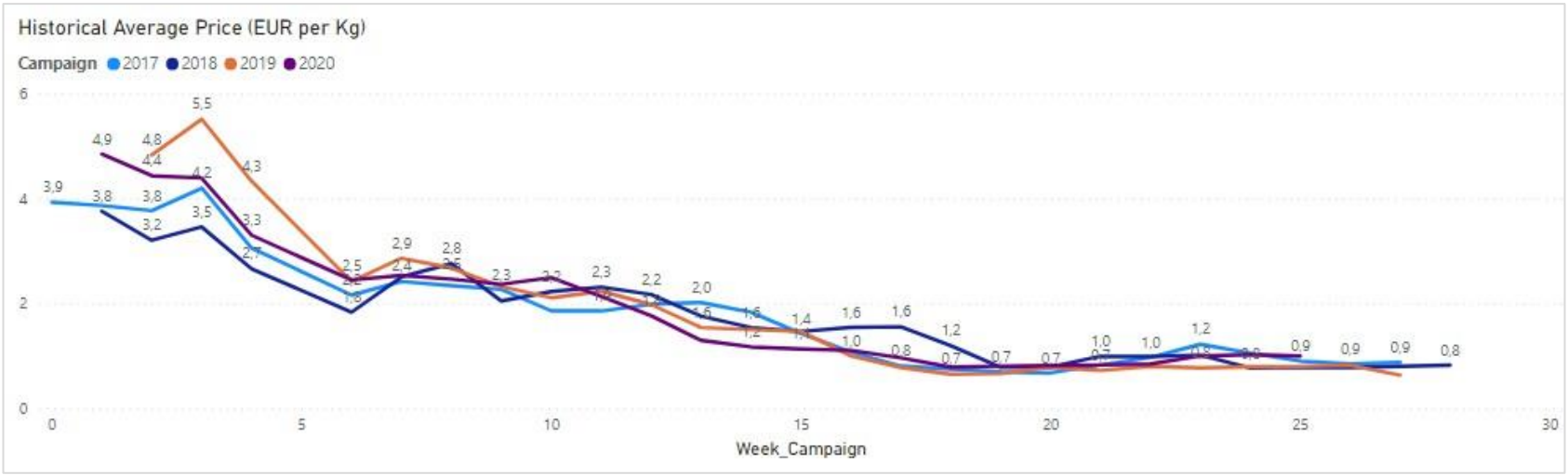


Campaign	2017	2018	2019	2020
Starting week	05/09/2016	04/09/2017	03/09/2018	02/09/2019
Average	5,63	6,12	5,83	5,71
Standard Dev	1,13	1,17	0,93	0,85
Minimum	3,63	3,32	4,22	4,30
1st percentil	4,71	5,61	5,16	5,07
2nd percentil	5,70	6,28	5,82	5,57
3rd percentil	6,59	6,83	6,22	6,46
Maximum	7,37	7,90	7,75	7,25
Campaign wk 38	4,34	5,33	4,50	5,10

Berries market price analysis

Spanish farm gate prices strawberry

Work in progress



Campaign	2017	2018	2019	2020
Starting week	04/12/2017	04/12/2017	03/12/2018	02/12/2019
Average	1,85	1,74	1,81	1,93
Standard Dev	1,10	0,90	1,37	1,25
Minimum	0,69	0,78	0,65	0,80
1st percentil	0,90	0,92	0,80	1,00
2nd percentil	1,84	1,56	1,48	1,25
3rd percentil	2,32	2,28	2,33	2,48
Maximum	4,21	3,77	5,52	4,86
Campaign wk 25	0,91	0,80	0,81	1,01

Berries market price analysis

Conclusions and next steps

Work in progress

Conclusions:

Important influence of seasonality on prices by product and region

Also external factors such as Covid-19 may affect the expected market prices

Next Steps:

Change US analysis from natural year to campaign year

Cross-check this data with Planasa Group prices

Create a Machine Learning model to predict prices

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Annex

Jupyter Notebooks

Work in progress

ETL has been done in Python code using the following packages: pandas, datetime, pyplot, seaborn and matplotlib

US_MX_Prices

ES_Prices