

SWIRE INNOVATORS

Sai Eshwar

Abhiram Mannam

Kushal Ram



BUSINESS PROBLEM



Accurately predict the demand for each innovative beverage product to streamline production process and consumer needs efficiently.

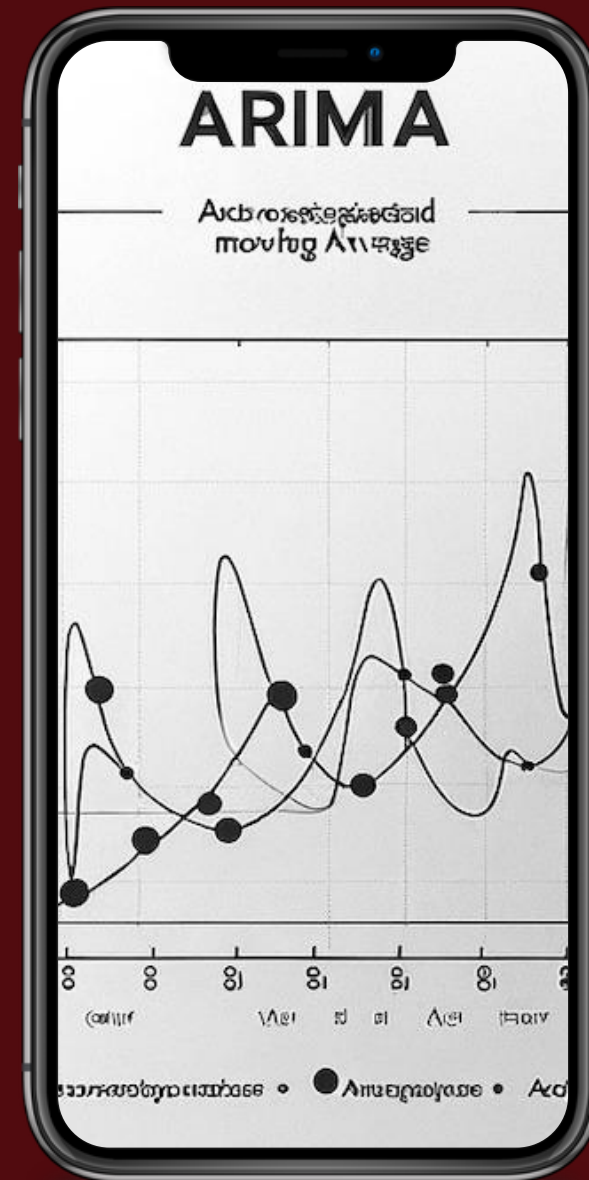
IMPACT



Ensure efficient resource allocation, boosts customer satisfaction, strengthen brand loyalty, drive more sales performance, and increase profitability.

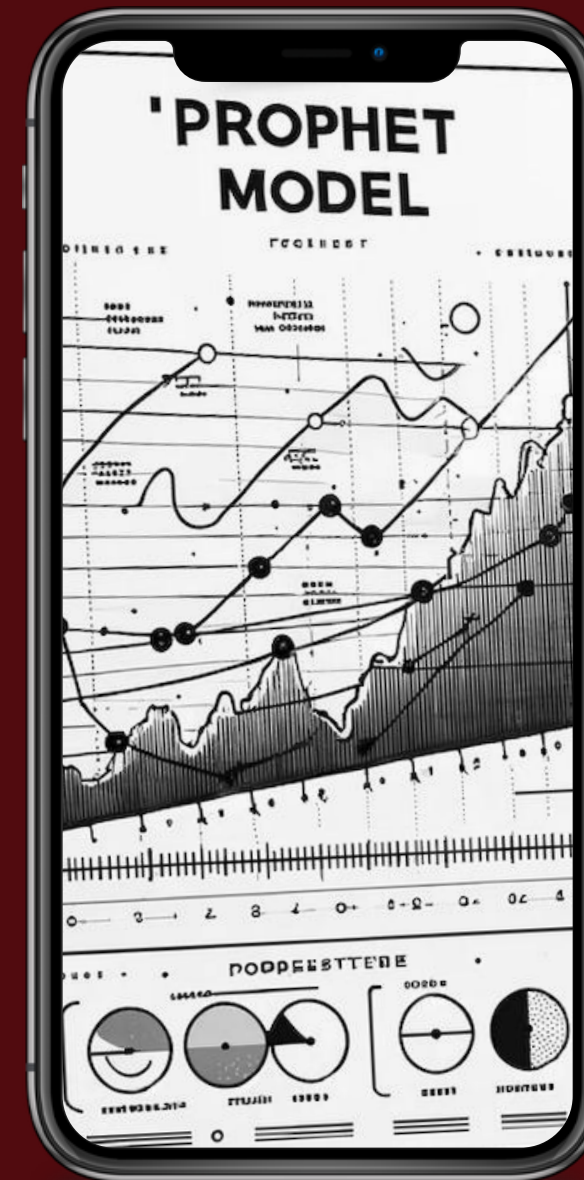
HOW CAN WE ANALYZE

Time Series Forecasting



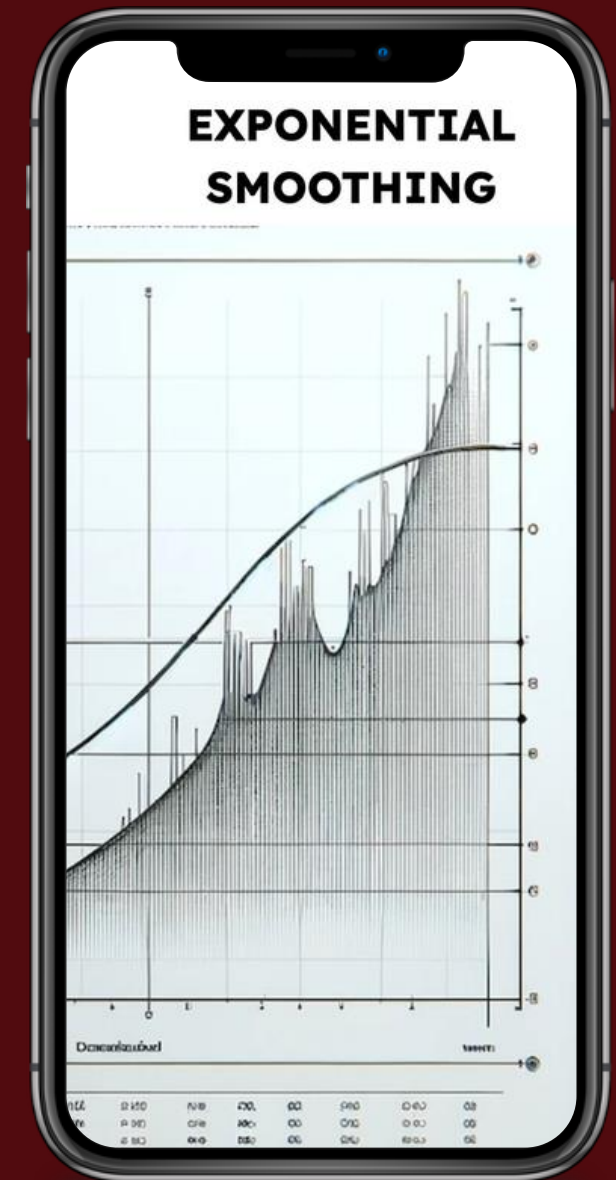
ARIMA

Combines autoregressive, integrated, and moving average components to capture temporal patterns in data.



PROPHET

Based on an additive regression models where non-linear trends are fit.



EXPONENTIAL
SMOOTHING

Uses weighted averages of past observations to predict new values.

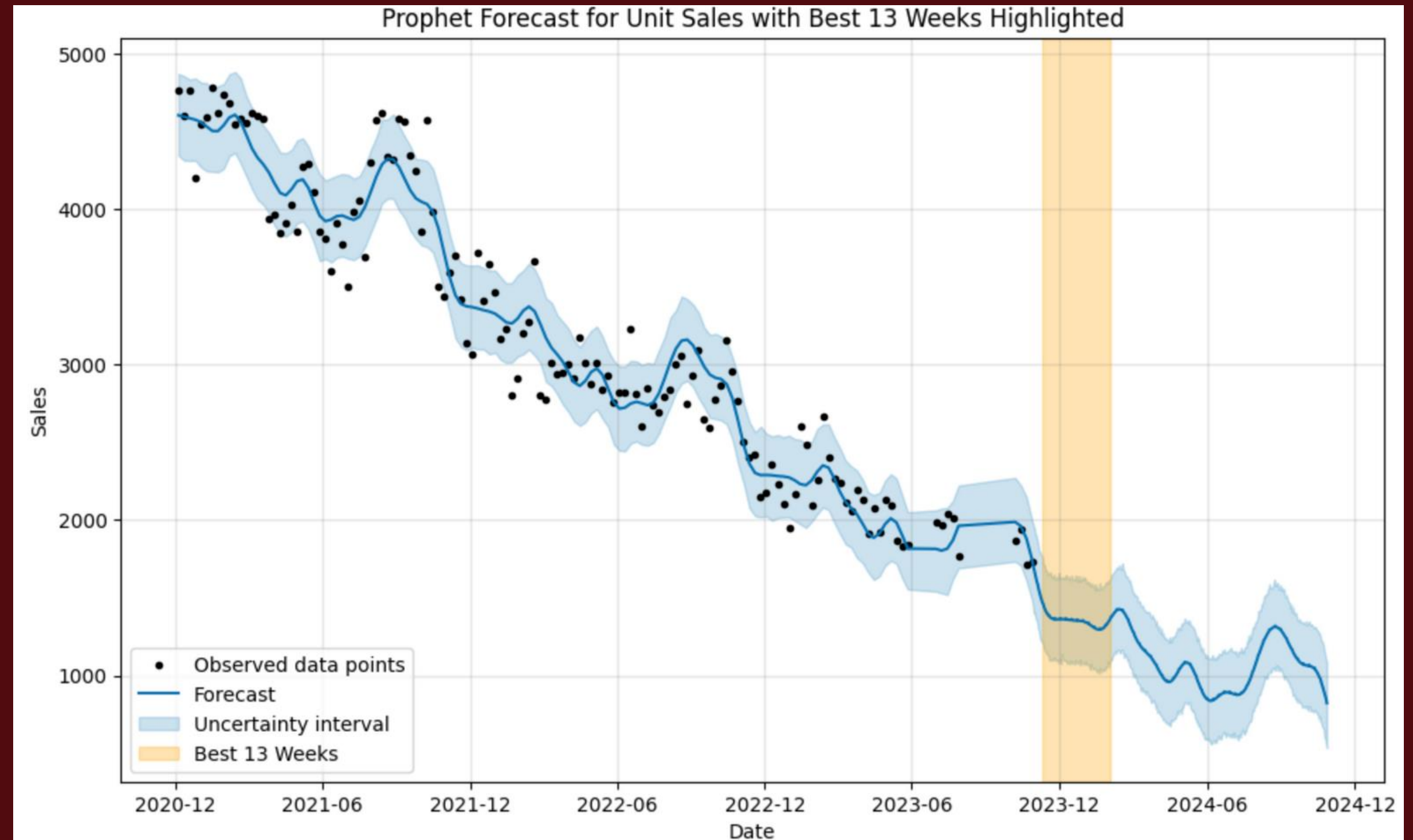
INNOVATIVE PRODUCT

Item Description: Diet Venomous Blast Energy Drink Kiwano 16 Liquid Small

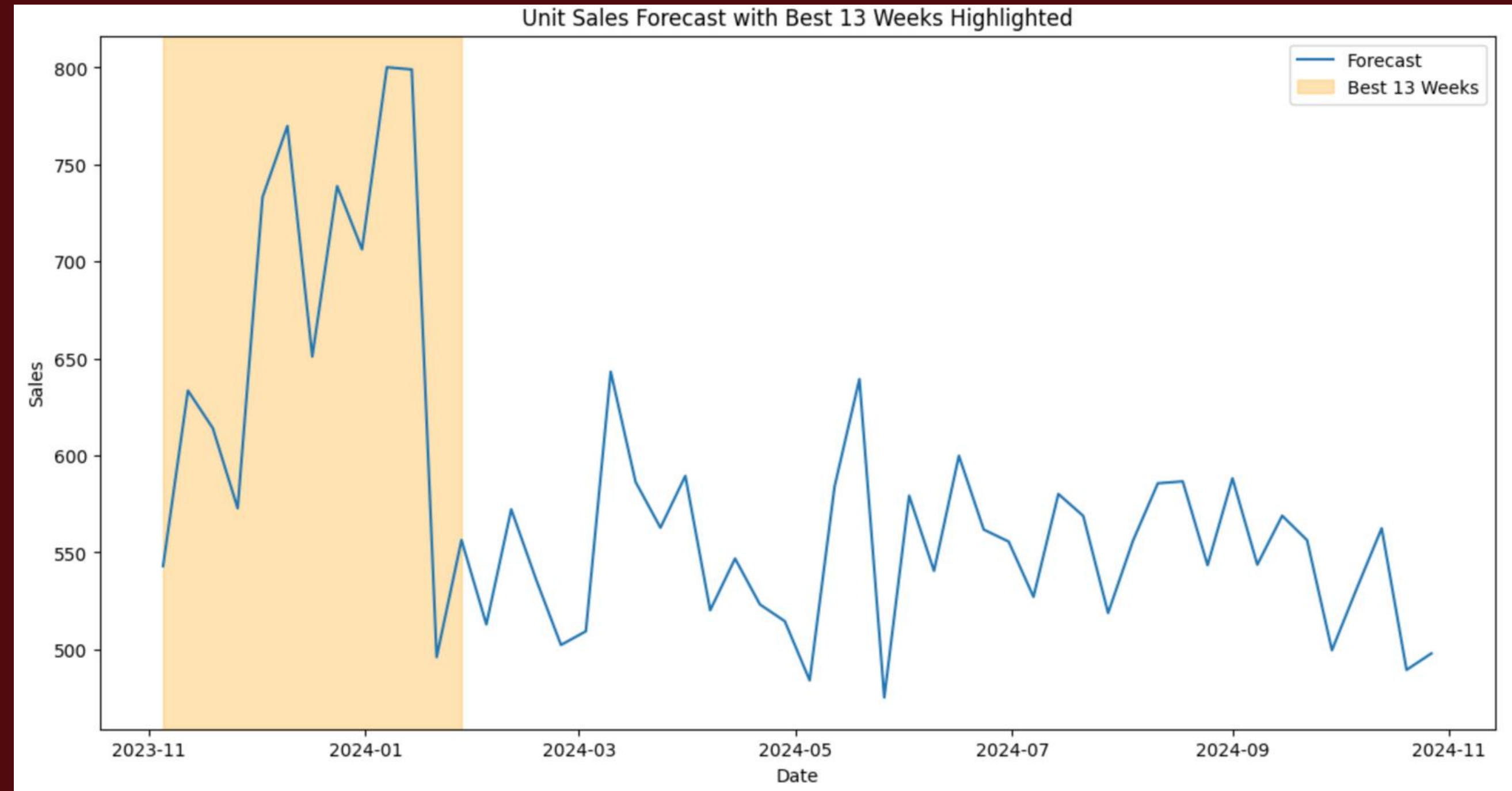
Which 13 weeks of the year would this product perform best in the market?
What is the forecasted demand, in weeks, for those 13 weeks?



- Swire-CC, Diet/Light, Energy, and Venomous Blast
- Prophet Model
- Best 13 weeks - 2023-11-05 to 2024-02-04
- Total sales are around 27000 - 27100



- Kiwano flavor with Swire-CC, Energy, and Diet/Light Caloric segment.
- Exponential Smoothing Model
- Best 13 weeks - 2023-11-05 to 2024-02-04
- Total sales are around 8600- 8650



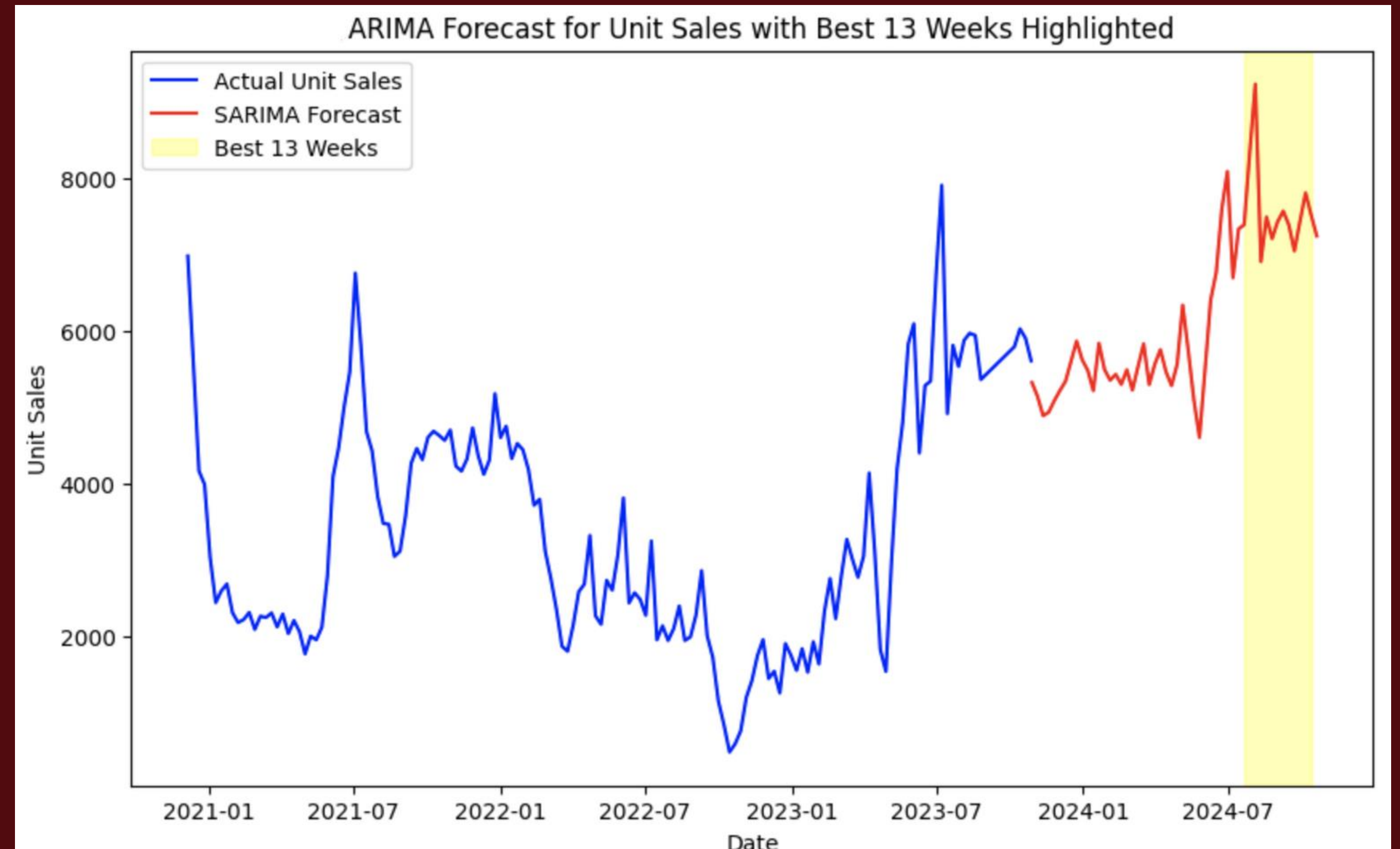
INNOVATIVE PRODUCT

Peppy Gentle Drink Pink Woodsy .5L Multi Jug

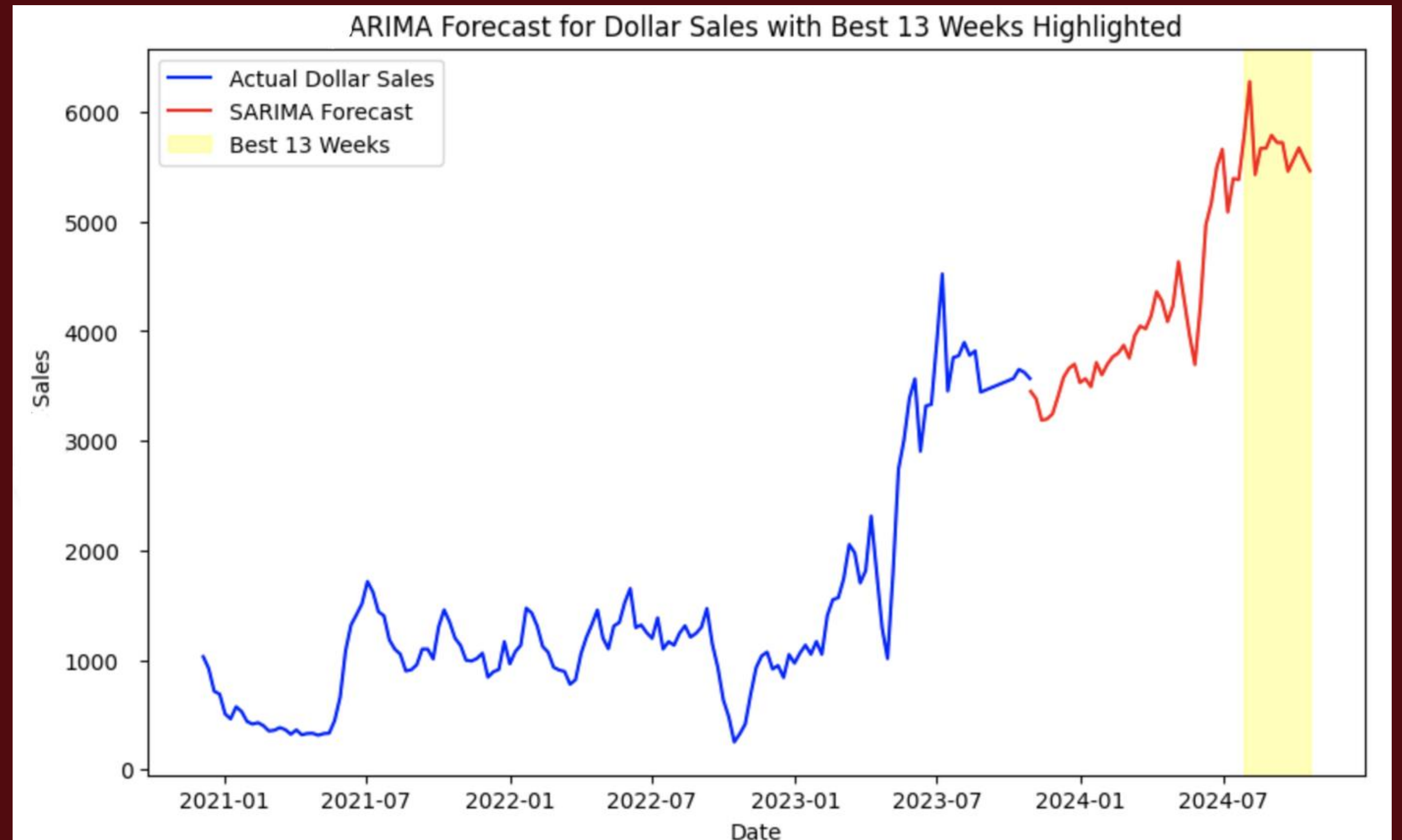
Swire plans to release this product in the Southern region for 13 weeks.
What will the forecasted demand be, in weeks, for this product?



- Peppy brand with Swire-CC, category SSD, and Regular caloric segment in Southern Regions like KS, UT, CA, CO, AZ, NM, NV
- ARIMA Model
- Best 13 weeks - 2024-7-14 to 2024-10-12
- Total sales are around 90700- 98400



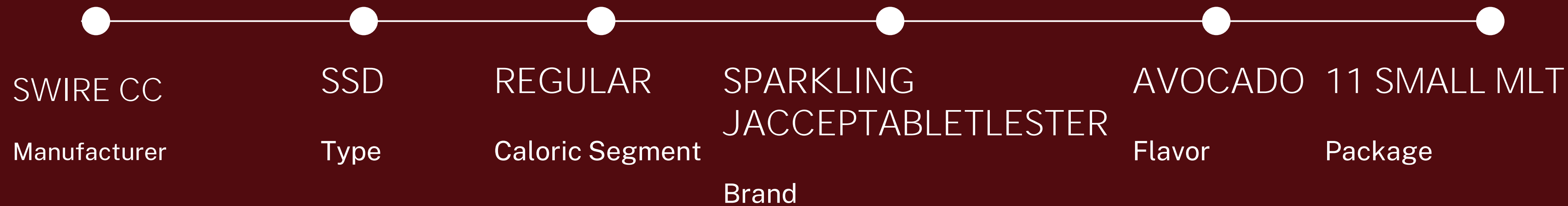
- Package type .5L Multi Jug with Swire-CC, category of SSD and Regular caloric segment in Southern Regions like KS, UT, CA, CO, AZ, NM, NV
- ARIMA Model
- Best 13 weeks - 2024-07-14 to 2024-10-12
- Total sales are around 78100- 78200



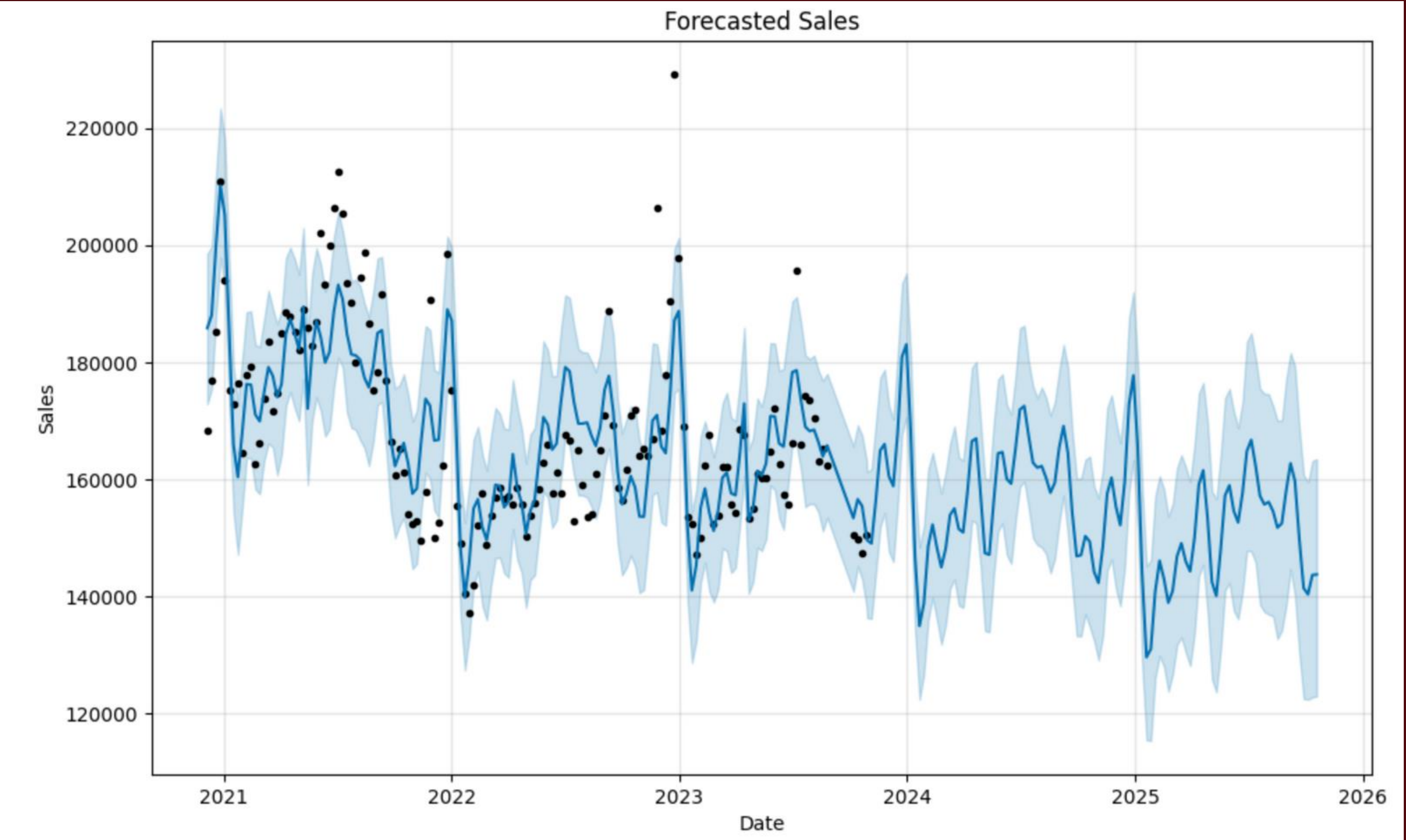
INNOVATIVE PRODUCT

Sparkling Jacceptablester Avocado 11Small MLT

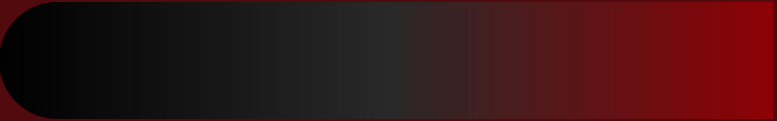
Swire plans to release this product 2 weeks prior to Easter and 2 weeks post-Easter.
What will the forecasted demand be, in weeks, for this product?



- Regular, Swire-CC, SSD, and Sparkling Jacceptabletlester
- Prophet Model

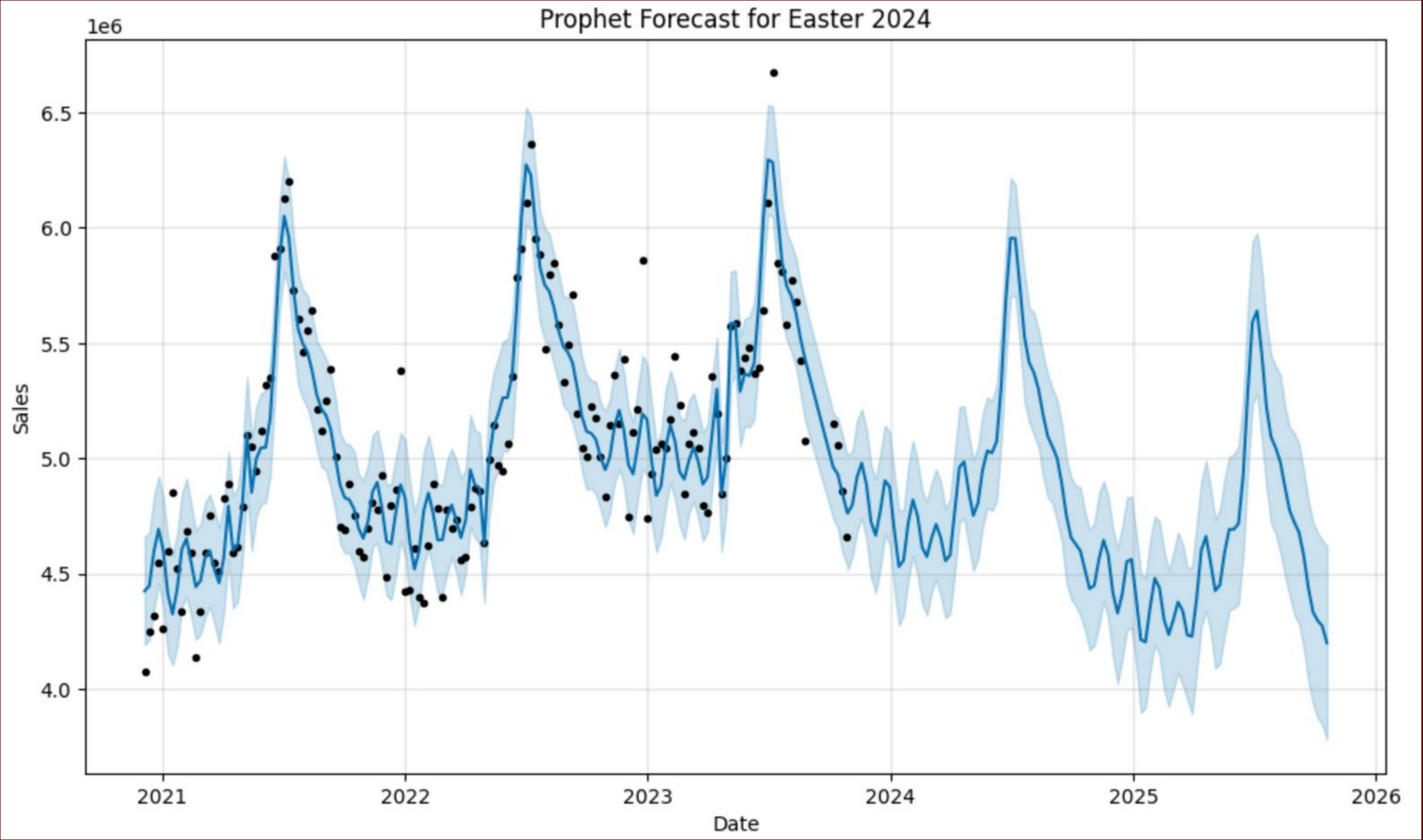


Date	Sales	Lower Sales	Upper Sales
2024-03-17	154963.60	142847.70	169009.20
2024-03-24	151460.39	138399.73	163754.35
2024-03-31	150883.69	138005.48	163109.88
2024-04-07	157795.68	144220.88	170463.25
2024-04-14	166462.77	152925.97	179011.98





Date	Sales	Lower Sales	Upper Sales
2024-03-17	4655656.80	4399291.30	4896550.68
2024-03-24	4555302.86	4307103.15	4779492.47
2024-03-31	4580217.37	4329210.64	4826482.19
2024-04-07	4767931.75	4505611.14	5023997.10
2024-04-14	4961129.95	4722440.13	5222179.70



- Non-Swire - CC Manufacturer, and Avocado flavor with category of SSD and Regular
- Prophet Model

RECOMMENDATIONS

INNOVATIVE PRODUCT	BEST WEEKS / UNIT SALES
<p>Item Description: Diet Venomous Blast Energy Drink Kiwano 16 Liquid Small</p> <p>Which 13 weeks of the year would this product perform best in the market? What is the forecasted demand in weeks for those 13 weeks?</p>	<p>2023-11-05 to 2024-02-04</p>
<p>Peppy Gentle Drink Pink Woodsy .5L Multi Jug</p> <p>Swire plans to release this product in the Southern region for 13 weeks. What will the forecasted demand be, in weeks, for this product?</p>	<p>2024-07-21 to 2024-10-03</p>
<p>Sparkling Jacceptabletleser Avocado 11Small MLT</p> <p>Swire plans to release this product 2 weeks prior to Easter and 2 weeks post-Easter. What will the forecasted demand be, in weeks, for this product?</p>	<p>142847 to 179000</p>

Inflation Resilience

Coffee Revitalization

Avocado Demand Surge

Mulberry Niche Appeal

Western Market Dominance

Seasonal Sales Peak

FUTURE

- Surveys
- Recommendations
- AI Analysis



<https://swirewebsite-kxgpyieata-wm.a.run.app/>



Thank you!