

# SALES & PRODUCTION ANALYSIS

**Jonathan van der Waard**

**June 2022**





# AIKEEN INDUSTRIES

## Forecast Analysis for Jan '20 - Apr '22: Significant discrepancies, but improving since Jan '22.



- Production Forecast on average was 34K higher (this is +17%) in quantity per month than the Sales Forecast.
- Production on average was 118K lower (this is -49%) in quantity per month than the Production Forecast, resulting in a Forecast Accuracy of 51%.
- Actual Production and the Production forecast are much more aligned as of January 2022. With a similar forecast, much more production!
- A question to consider is: Why not work with 1 integrated forecast only?

## Inventory Analysis for May '22: Under- and overstocked products. Only 8% of the portfolio sold in May.



- In May '22, a total of 44 products ran out of stock, resulting in unfulfilled orders. At the same time 50 products are overstocked.
- There are 51 products that have a Fill Rate lower than average (77.7%). These need special attention to prevent further stock shortages and/or unfulfilled orders.
- In May '22 the Sell-Through Rate was 1.13. Only 7 products score higher than this average. A total of 147 products have a Sell-Through Rate of 0...
- 8% of the total product portfolio is sold recently. 1658 products are inactive at the 5th of May.

## The forecast can be simplified and improved: predicted forecast & recommendations included.



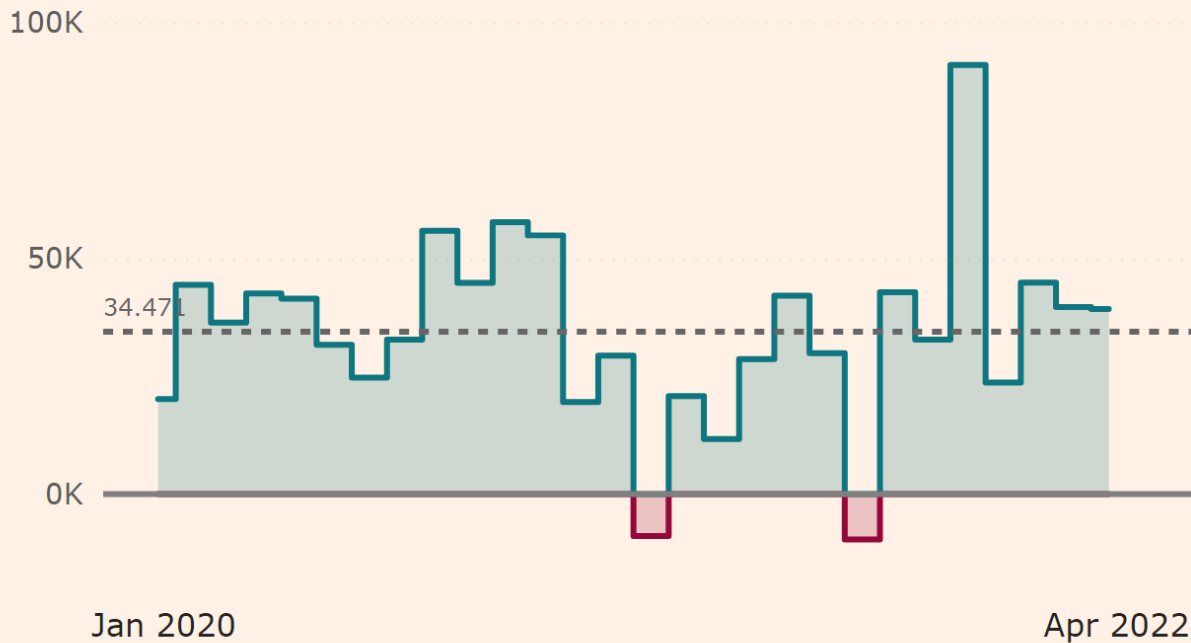
- Key recommendations are:
  - Simplify
  - Fix
  - Improve
  - Refine
- A Predicted Forecast is based on the combination of: average production of the last 3 years, limits the stock to the sales of 2 weeks (based on May sales) and allows for an expected increase or decrease, whilst ensuring both the Sell-Through Rate and the Fill Rate to be 1. The recommendation is to consistently produce on a daily basis.



## Production Forecast vs Sales Forecast shows a solid Production Forecast surplus...

Production Forecast on average was 34K higher (this is +17%) in quantity per month than the Sales Forecast.

The views below reflect the past period:



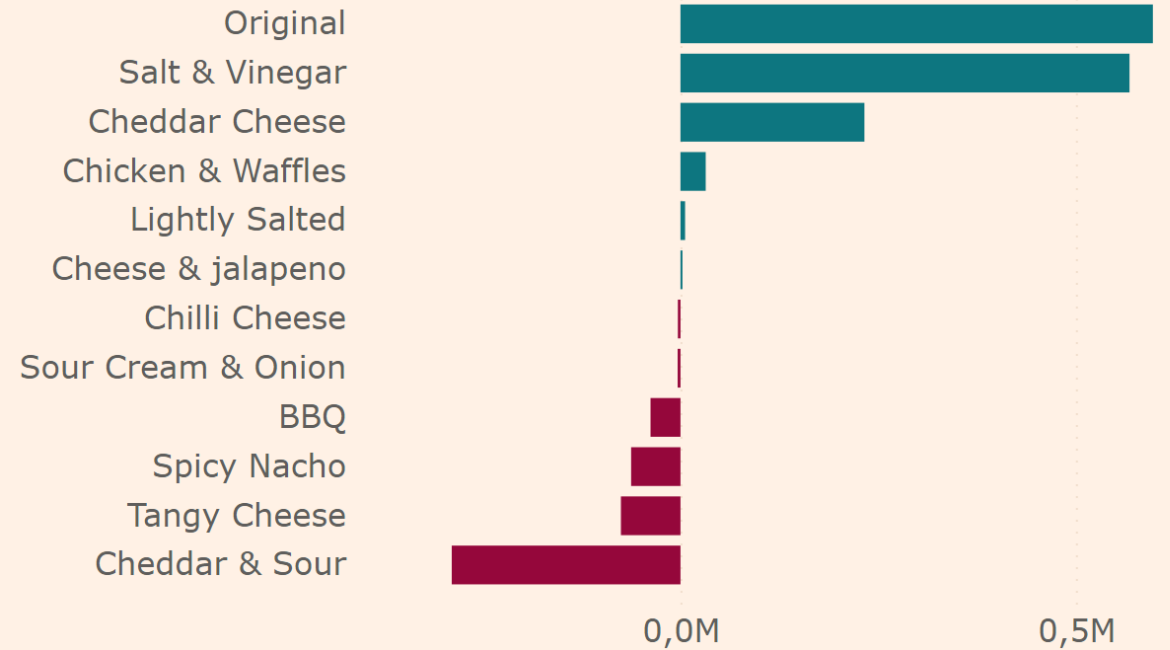
Jan 2020

Apr 2022

[Show the forecasts instead of showing the surplus & deficit view...](#)

## Resulting in a total Production Forecast surplus of 965.2K. Product types show interesting differences.

In total, the Production Forecast for Original was 597K units higher than the Sales Forecast, whereas for Cheddar & Sour the Production Forecast was 289K units lower than the Sales Forecast.



0,0M

0,5M



## Can we simplify?

Why not work with 1 integrated forecast only?

[See this and other ideas in the Data-driven recommendations](#)



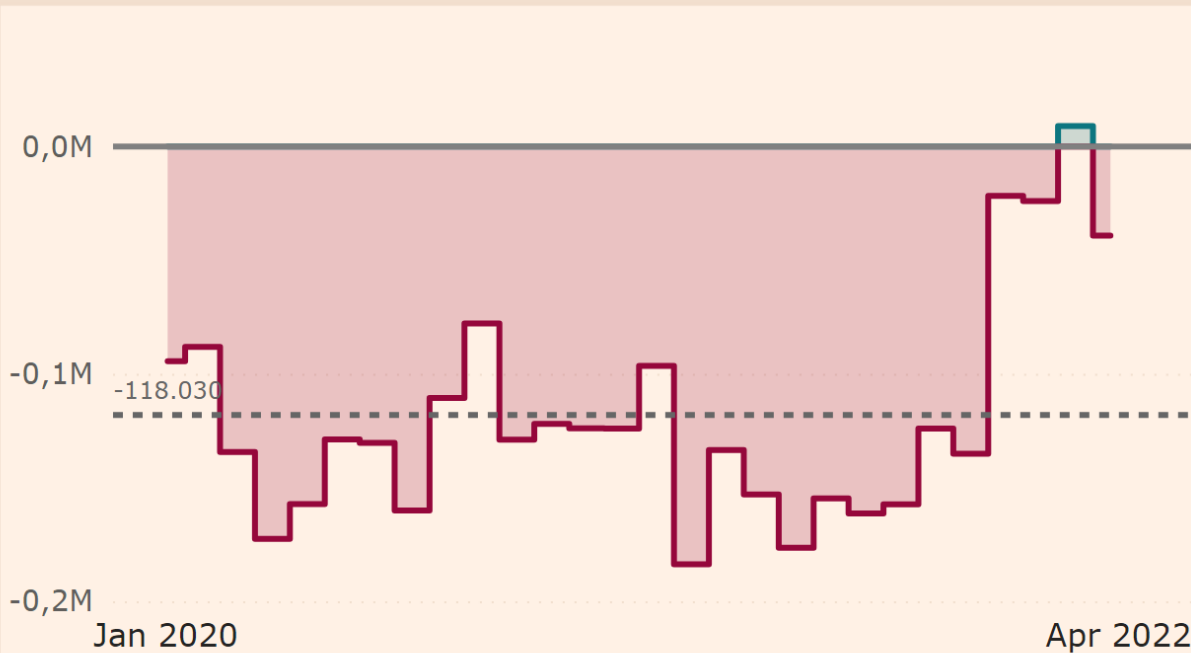
## Products with high inaccuracies?

Hover over the chart on the right and click the icons on the top right to drill down to product level. Click a bar to see the trend on the left.



## Actual Production is significantly below Production Forecast. The last months show improvement though.

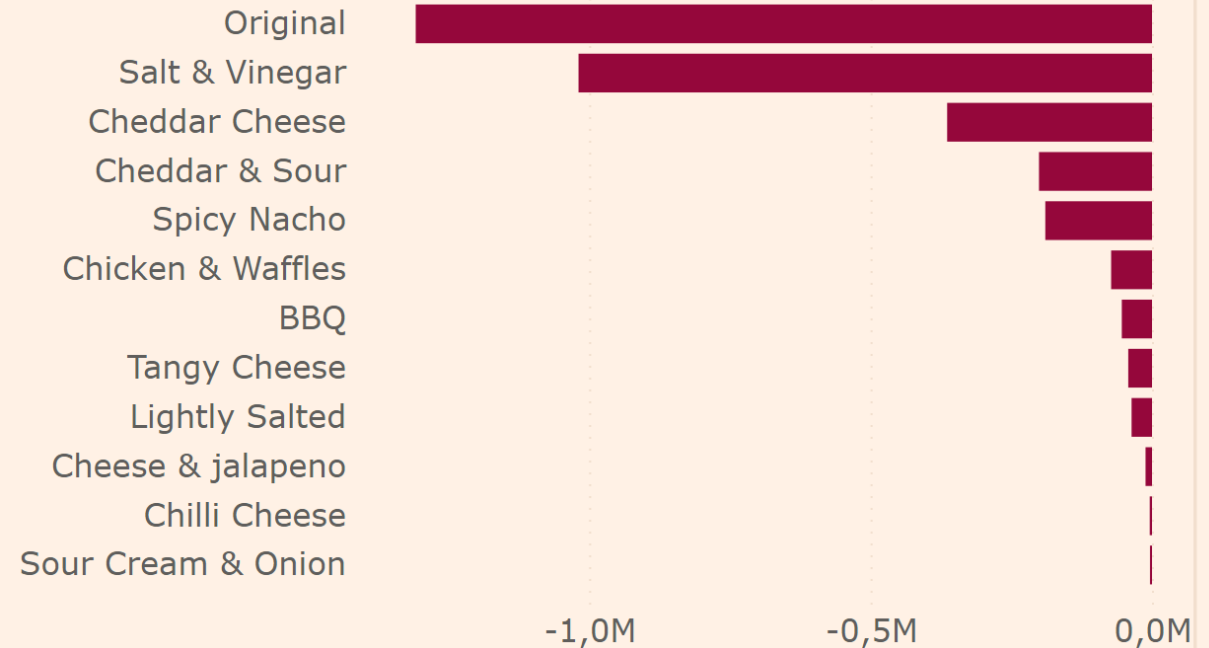
Production on average was 118K lower (this is -49%) in quantity per month than the Production Forecast, resulting in a Forecast Accuracy of 51%. The views below reflect the past period:



[Show the forecasts instead of showing the surplus & deficit view...](#)

## Resulting in a total Production deficit of 3.3M. For all Product types we produce less, but totals differ again.

In total, the Production for Sour Cream & Onion was 4K units lower than the Production Forecast, whereas for Original, Production was 1.3M units lower than the Production Forecast.



### What happened since January '22?

Actual Production and the Production forecast are much more aligned as of January 2022. With a similar forecast, much more production!



### Products with high inaccuracies?

Hover over the chart on the right and click the icons on the top right to drill down to product level. Click a bar to see the trend on the left.

# AIKEEN INDUSTRIES



EXECUTIVE SUMMARY

PRODUCTION FORECAST VS SALES FORECAST

ACTUAL PRODUCTION VS PRODUCTION FORECAST

FINISHED GOODS INVENTORY

SELL-THROUGH & FILL RATES

PREDICTIONS FOR FUTURE FORECASTS

DATA-DRIVEN RECOMMENDATIONS

**In May '22, a total of 44 products ran out of stock, resulting in unfulfilled orders. At the same time 50 products are overstocked.**

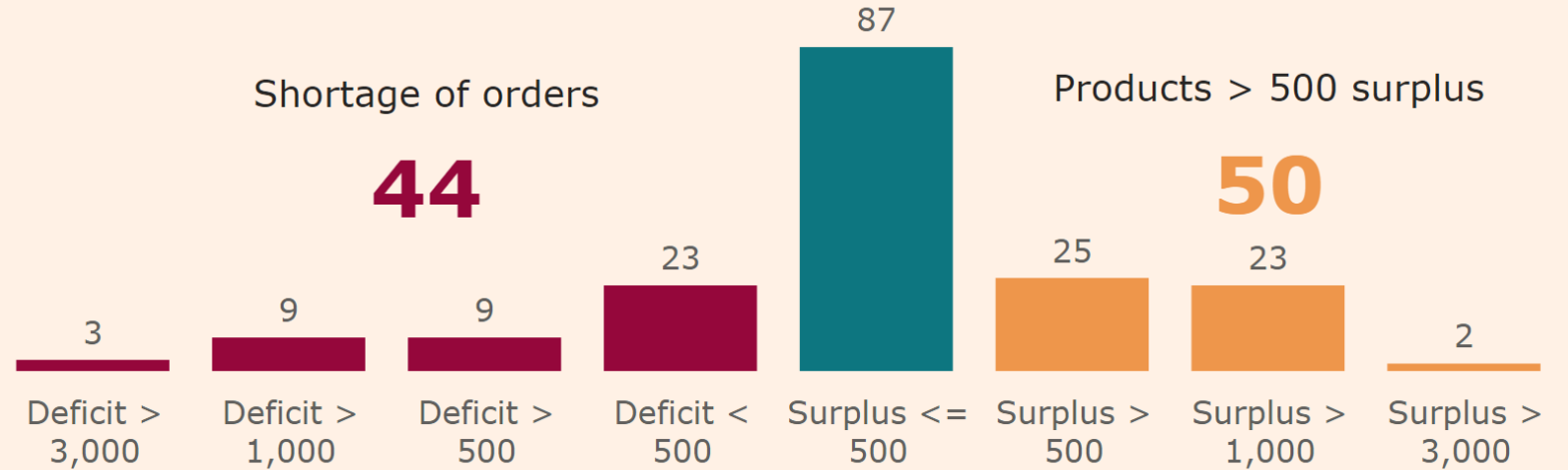
Action needs to be taken immediately to prevent the company from losing its customers and the good name it has built up over the years.

**8% of the total product portfolio is sold recently.**

Aikeen Industries has 139 products that are recently consumed / sold. This is 8% of the total portfolio.

**1658 products are inactive at the 5th of May.**

There are 1797 products in our system, but 1658 products are not consumed nor have any future sales in May. 42 of these still have stock.



Product	Closing Finished Goods early May	Sales quantity in May	Result
Product 125	811	4881	-4070
Product 144	1215	5271	-4056
Product 5	2284	5364	-3080
Product 115	758	3183	-2425
Product 141	960	3260	-2300
Product 152	217	2160	-1943
Product 169	1570	3381	-1811
Product 148	124	1585	-1461
Product 151	884	2197	-1313
Product 181	1125	2366	-1241
Product 165	1637	2802	-1165
Product 129	349	1497	-1148
Product 103	3735	4713	-978
Product 171	308	1246	-938



# AIKEEN INDUSTRIES

In May '22 the Sell-Through Rate was 1.13. Only 7 products score higher than this average. A total of 147 products have a Sell-Through Rate of 0...

There are 51 products that have a Fill Rate lower than average (77.7%). These need special attention to prevent further stock shortages and/or unfulfilled orders.

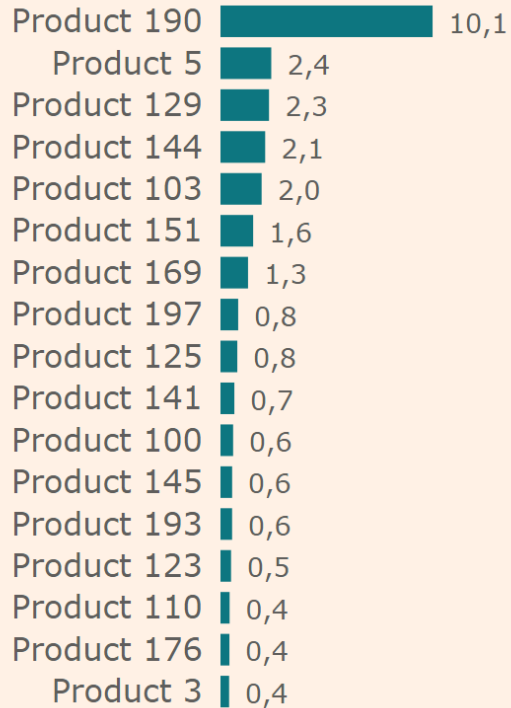
## Definitions

Fill rate = ((Total Units in inventory - Consumed Units) / Total Units in inventory) \*100

Sell-through rate = (Units Consumed / Units Produced)

- Alles selecteren
- BBQ
- Cheddar & Sour
- Cheddar Cheese
- Cheese & jalapeno
- Chicken & Waffles
- Chilli Cheese
- Lightly Salted
- Original
- Salt & Vinegar
- Sour Cream & Onion
- Spicy Nacho
- Tangy Cheese

## Sell-Through Rate

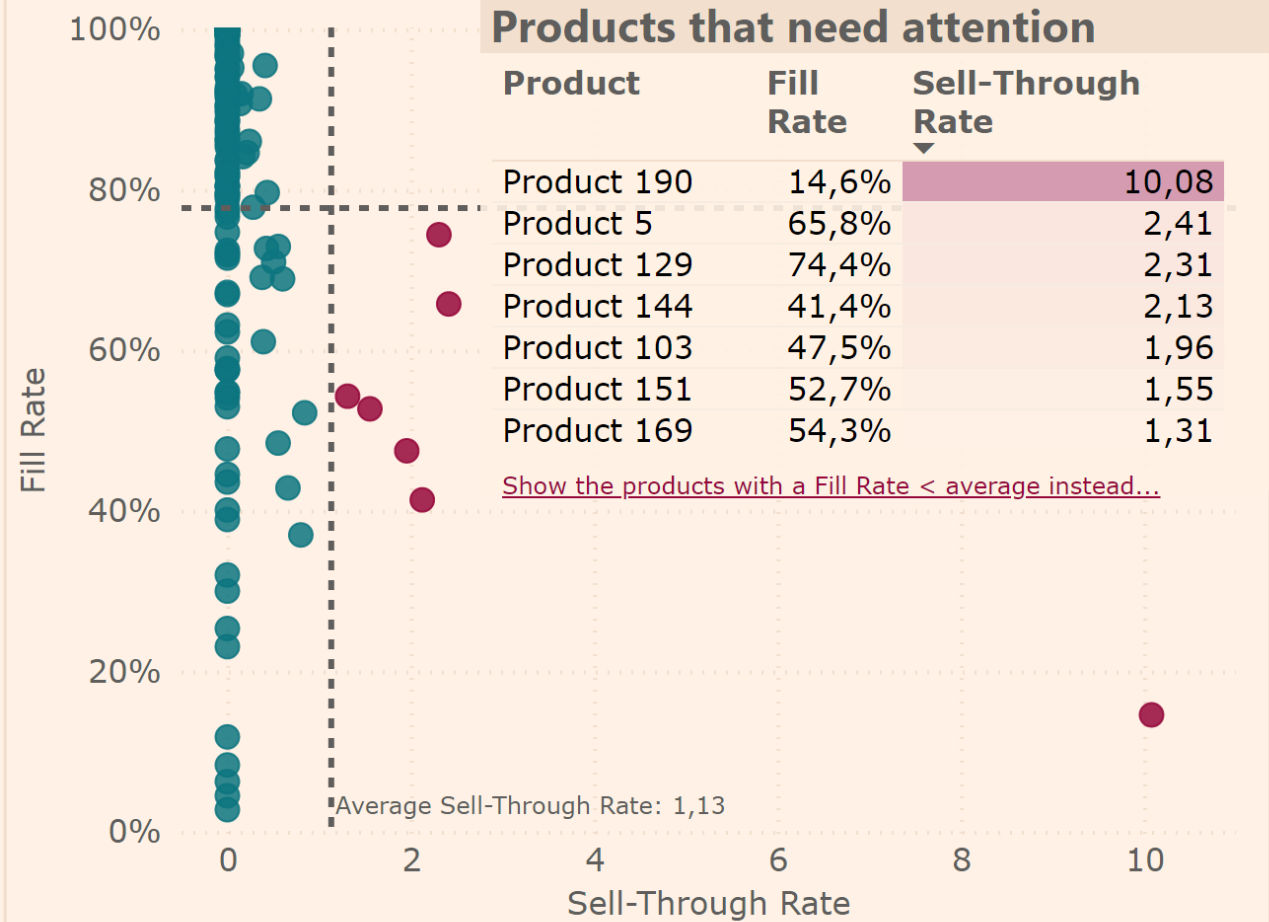


- Sell-Through Rate
- Fill Rate

## Products that need attention

Product	Fill Rate	Sell-Through Rate
Product 190	14,6%	10,08
Product 5	65,8%	2,41
Product 129	74,4%	2,31
Product 144	41,4%	2,13
Product 103	47,5%	1,96
Product 151	52,7%	1,55
Product 169	54,3%	1,31

Show the products with a Fill Rate < average instead...



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A Predicted Forecast is based on the combination of: average production of the last 3 years, it limits the stock to the sales of 2 weeks (based on May sales) and allows for an expected increase or decrease, whilst ensuring both the Sell-Through Rate and the Fill Rate to be 1. The recommendation is to consistently produce on a daily basis. <sup>(i)</sup>

## Expected increase or decrease percentage

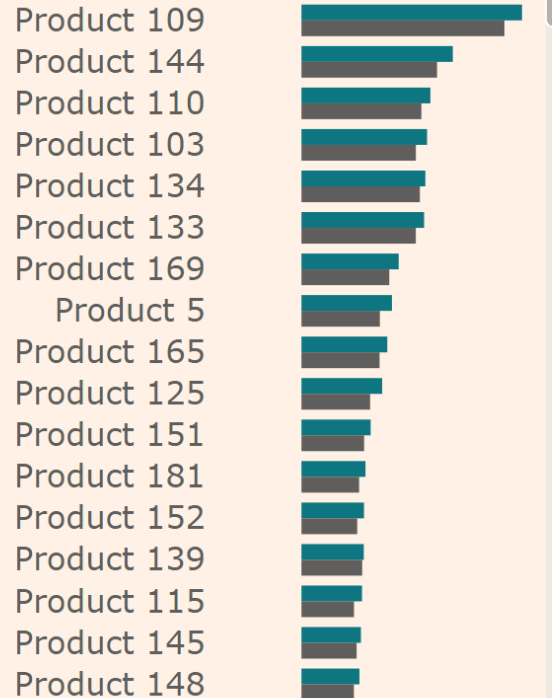
5%

1-1-2020

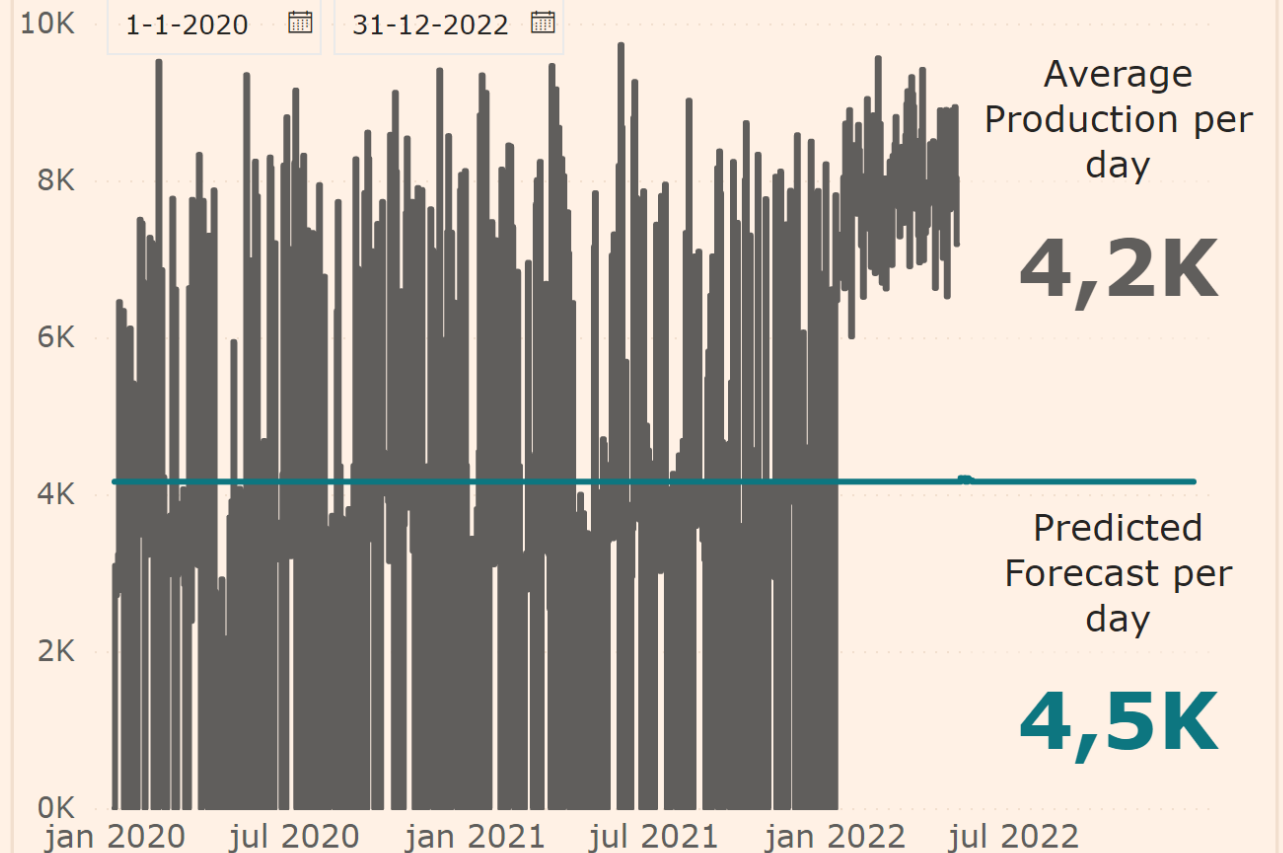
31-12-2022

- Alles selecteren
- BBQ
- Cheddar & Sour
- Cheddar Cheese
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## Predicted forecast vs Average Production per day



● Predicted forecast ● Average Production



The forecast of the past had huge fluctuations and lots of days (442 in total!) with no production.



**“Based on my extensive analysis of the data, I recommend to consider the following suggestions”**

Jonathan van der Waard



[Contact me](#)

## 1. SIMPLIFY

- Work with 1 forecast instead of 2 forecasts to reduce complexity.
- Work on Machine Utilization, either by reducing the number of machines or producing more.

[Show current machine utilization](#)

## 2. FIX ISSUES

- Align Products in Inventory, Sales orders and Forecast tables. [Show these products](#)
- For a few products the Closing numbers need correction. [Show these products](#)

## 3. IMPROVE

- Improve the Sell-Through Rate by improving the forecast. [Show rates](#) [Show predicted forecast](#)
- Improve the Product Portfolio: try to sell of the overstocked products, and clean up the Finished Goods Inventory table. [Show products that need attention](#)

## 4. REFINE

- Start working with proposed consistent forecast with the daily granularity and keep finetuning. [Show predicted forecast](#)